

FIG 1. A

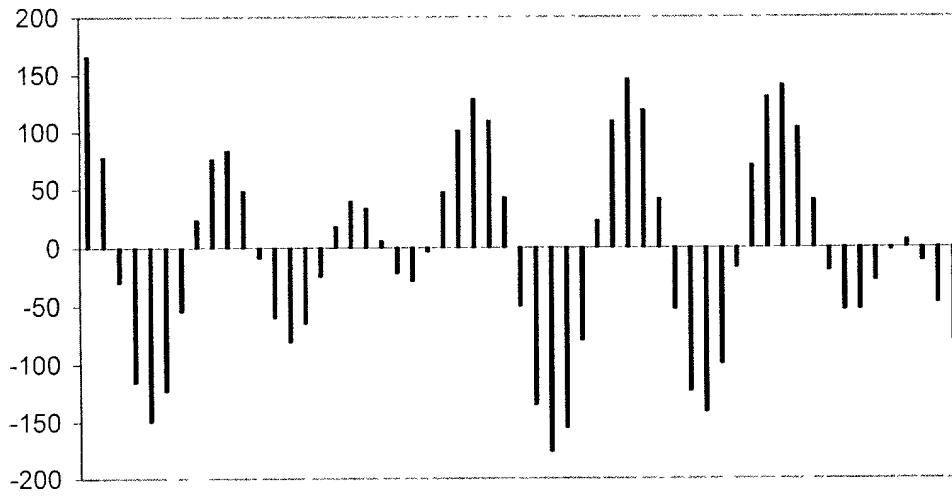


FIG 1. B

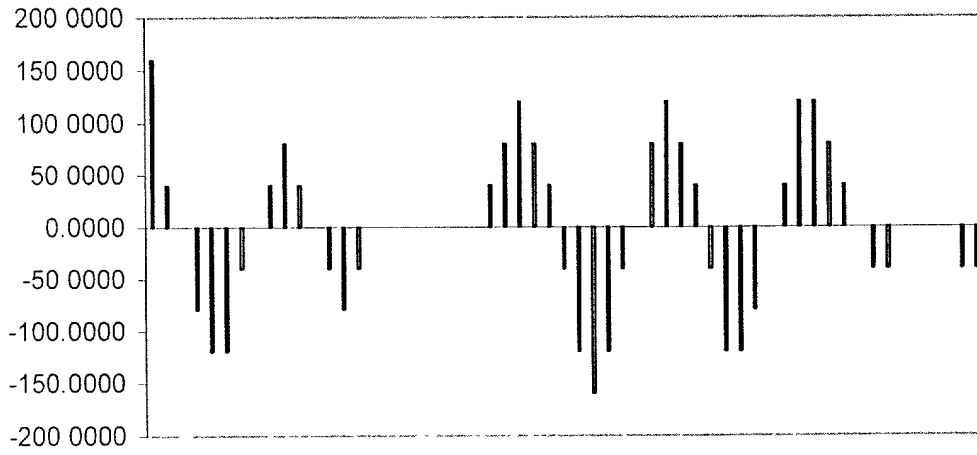


FIG 1. C

$$g(x) = c(n) \sqrt{\frac{2}{L}} \cos\left(\frac{n\pi x}{L}\right) \quad 0.5) \frac{n\pi}{L} \approx \dots$$

where,

$$c(n) = \frac{1}{\sqrt{2}} \text{ for } n = 0$$

and,

$$c(n) = 1 \text{ for all } n \neq 0$$

FIG. 1D

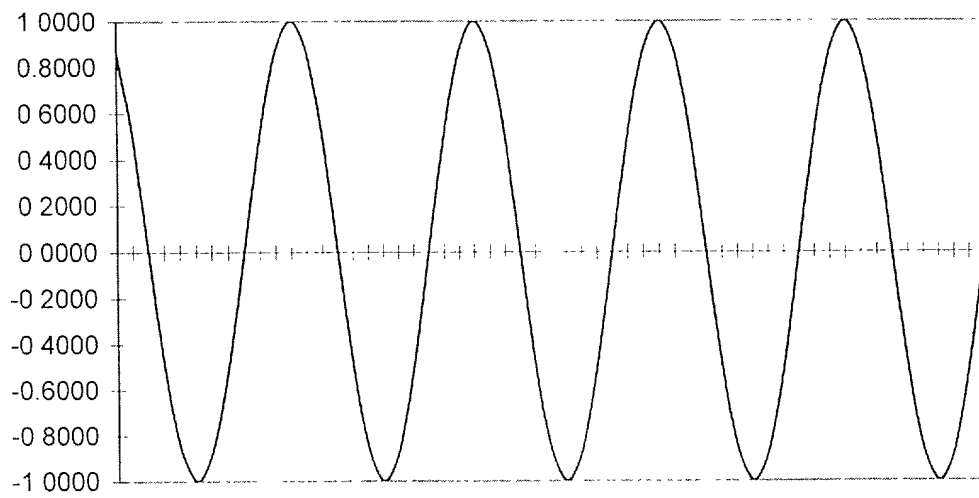
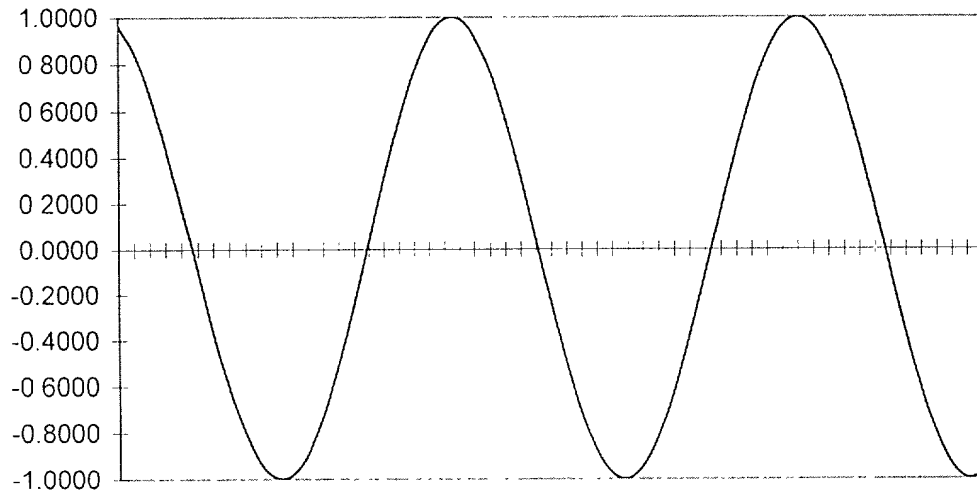
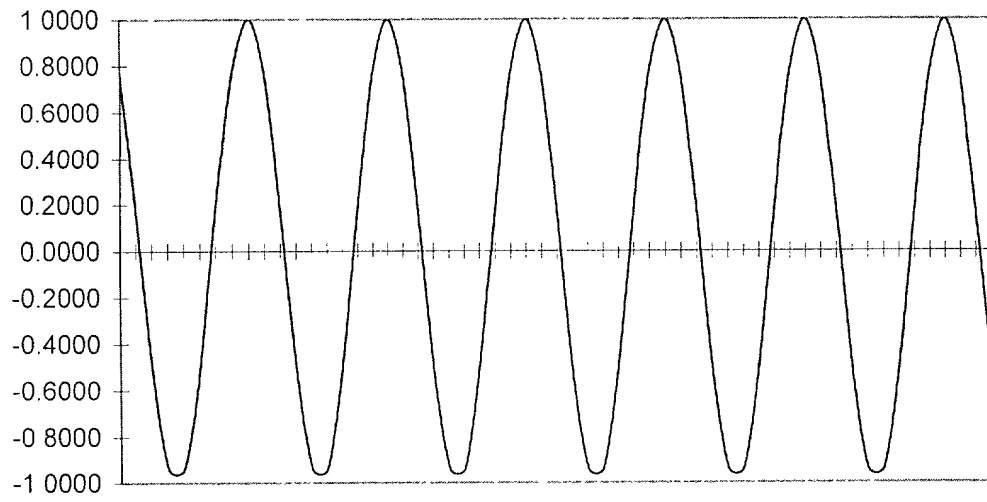


FIG. 1E

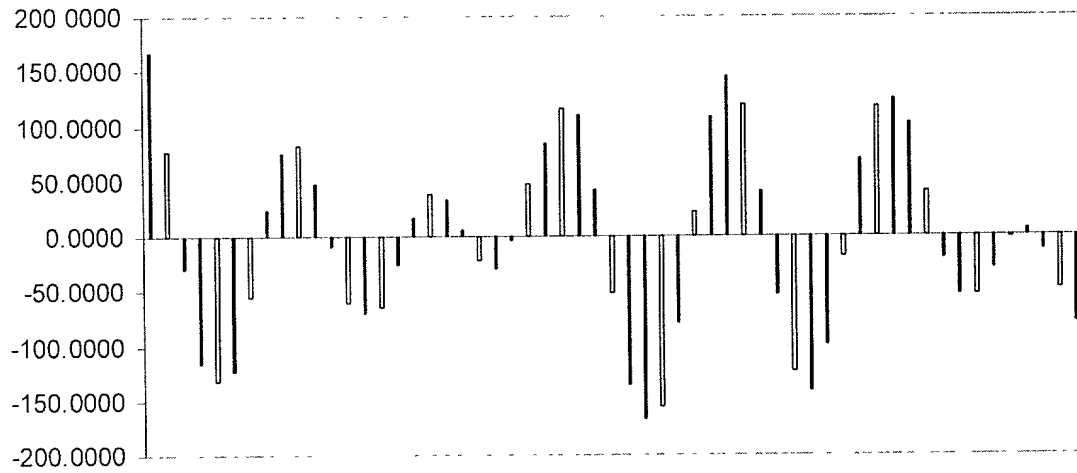


FIG 1. F

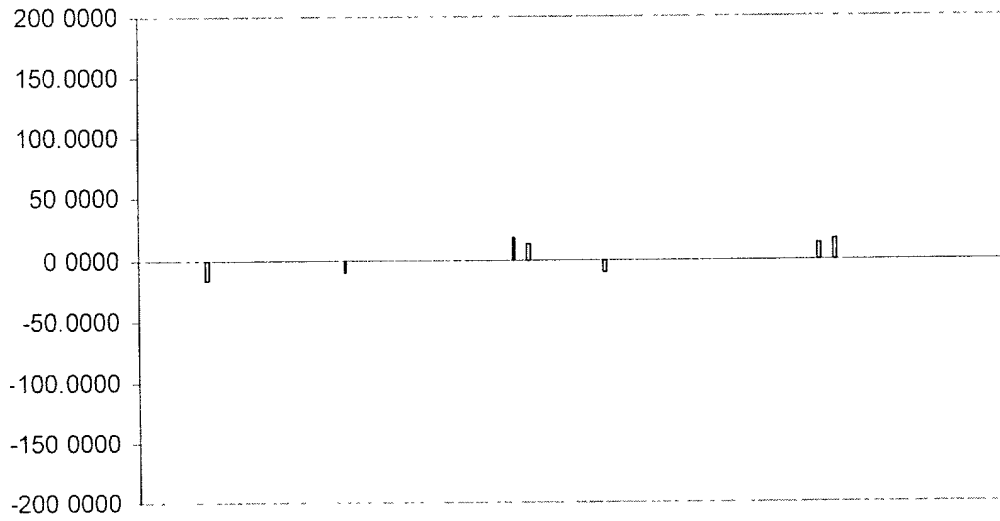


FIG 1. G

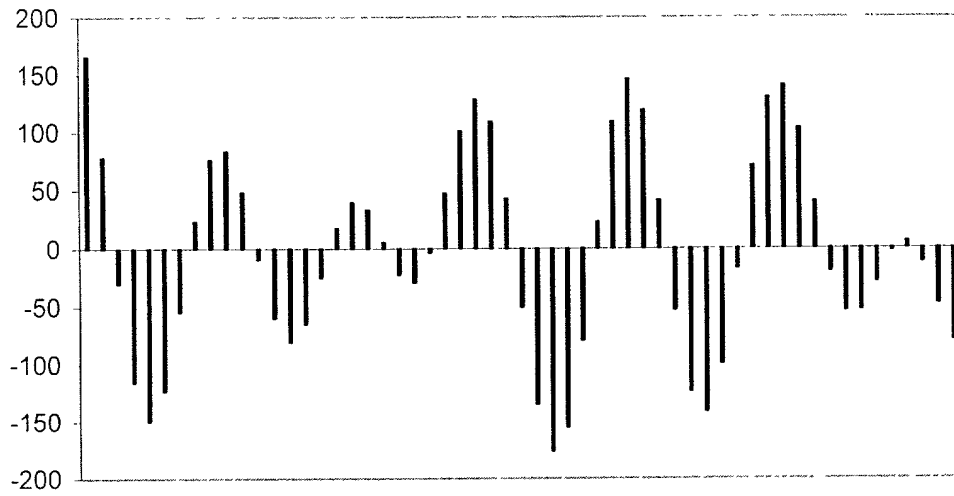


FIG 1. H

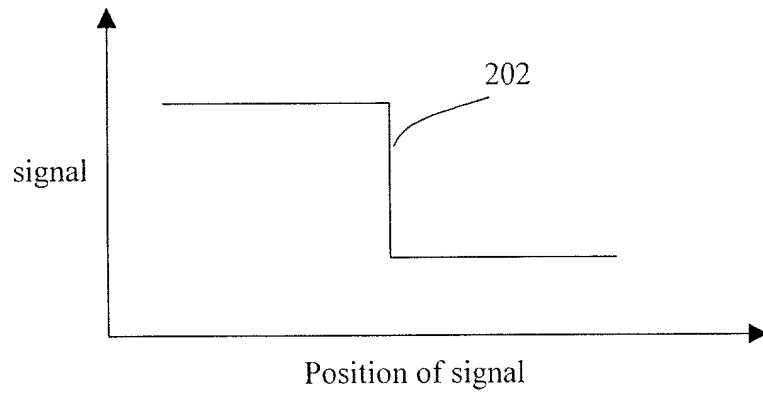


FIG. 2A

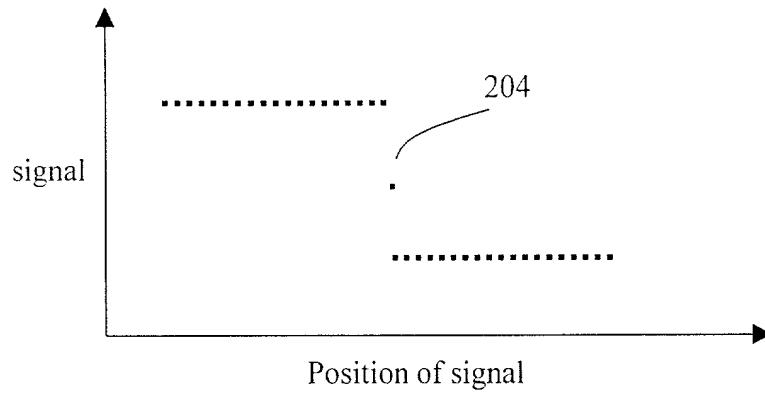


FIG. 2B

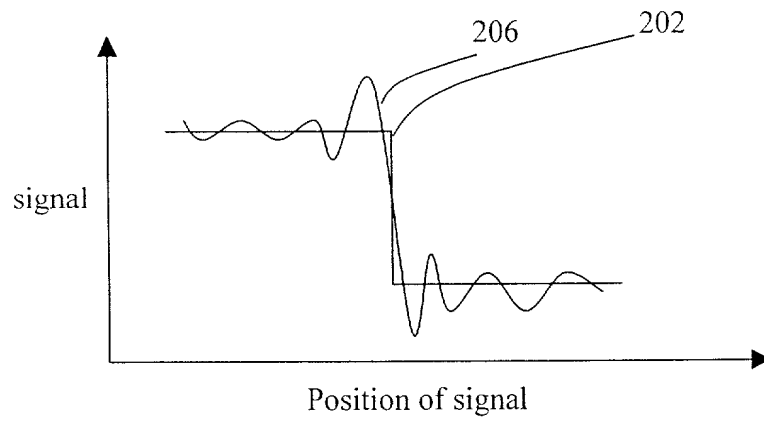


FIG.2C

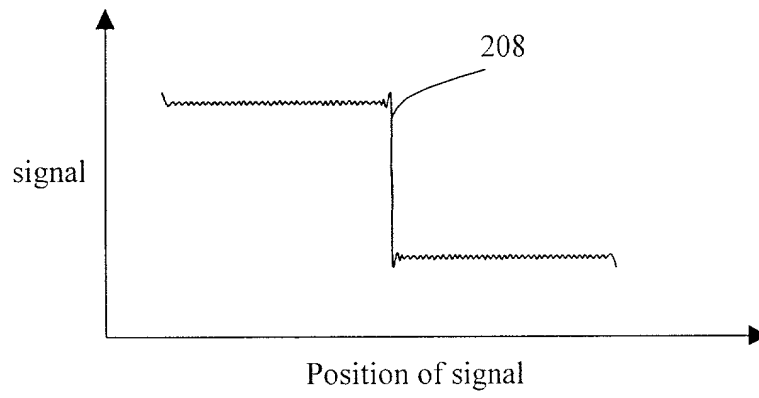


FIG.2D

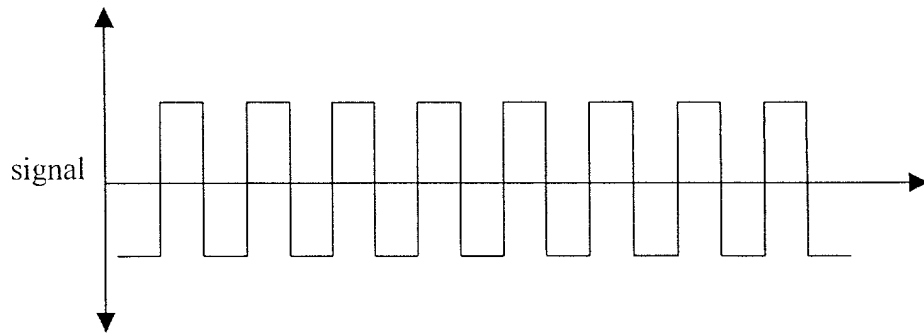
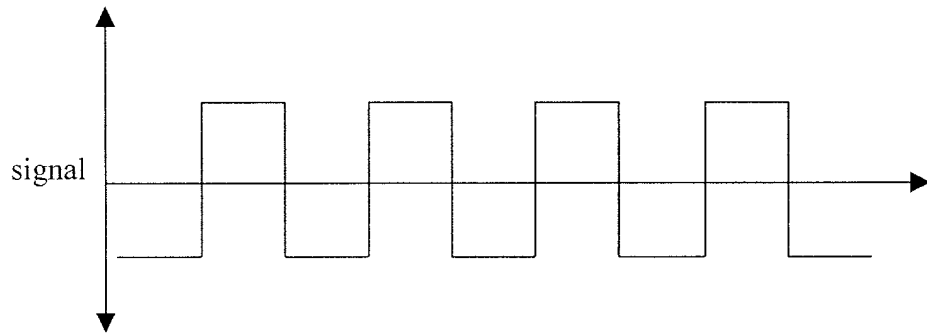
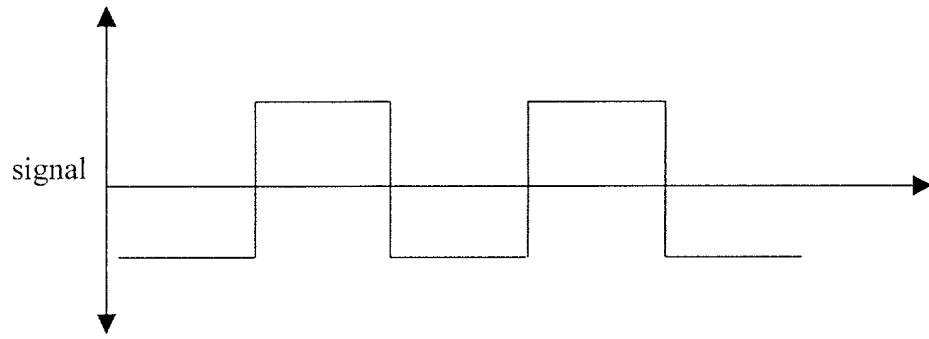


FIG.3

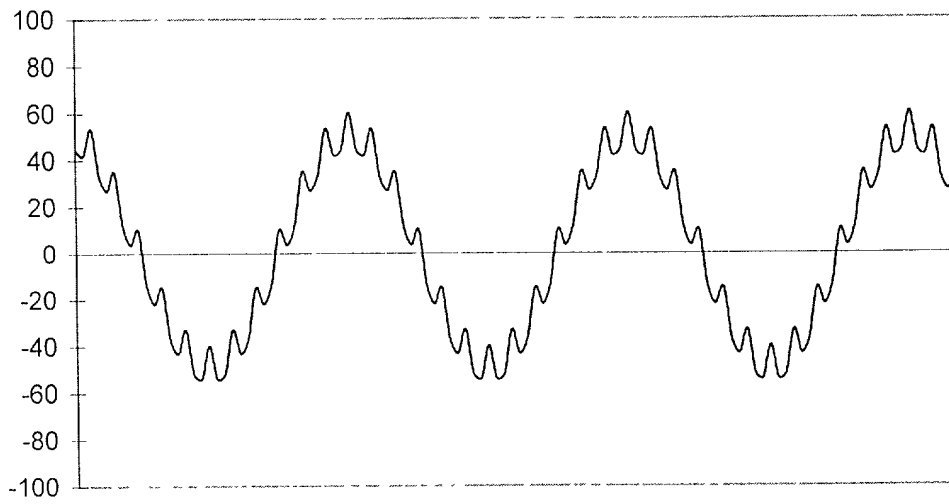


FIG.4A

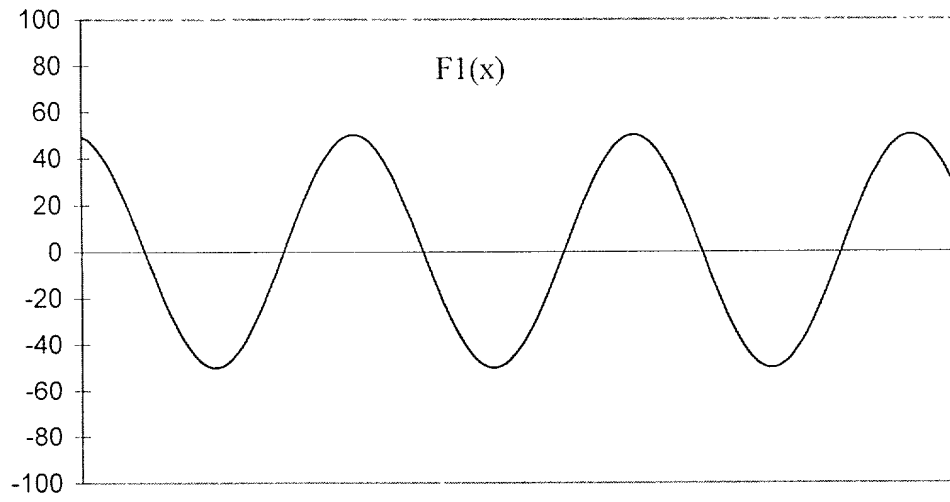


FIG.4B

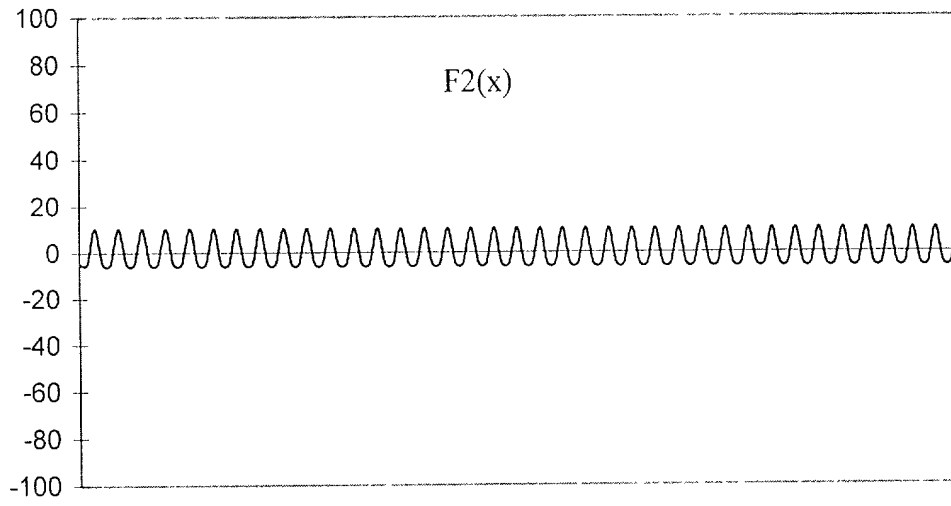


FIG.4C

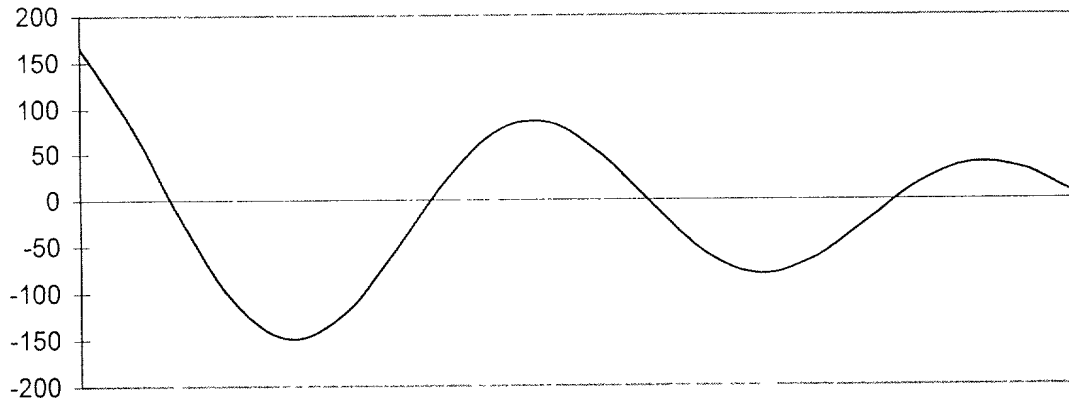


FIG.5A

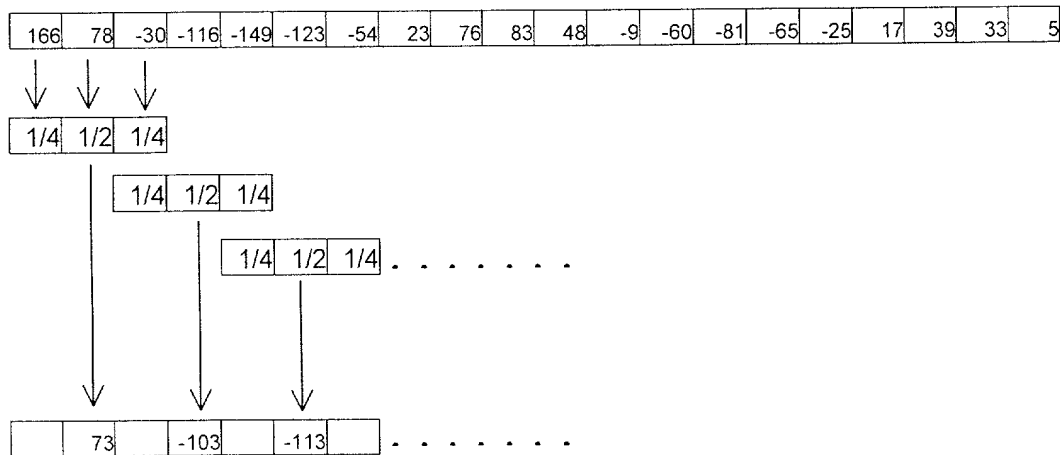
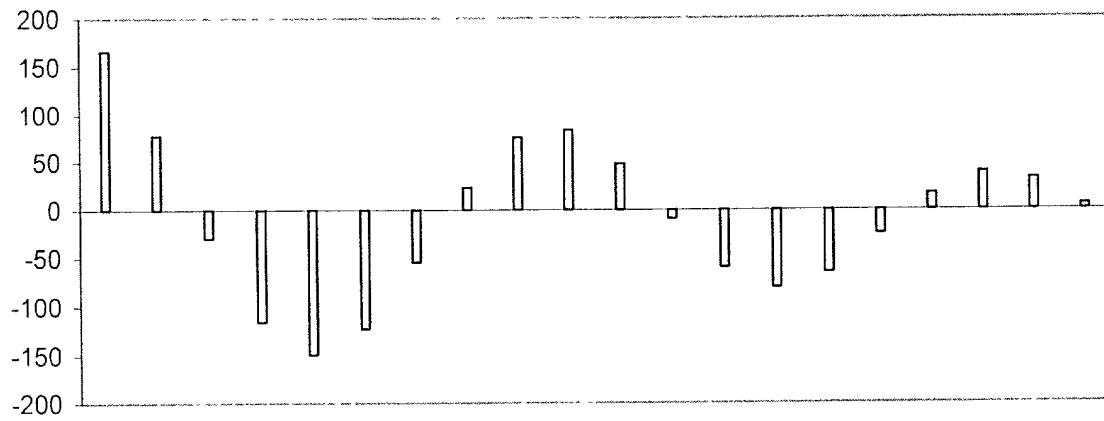


FIG.5B

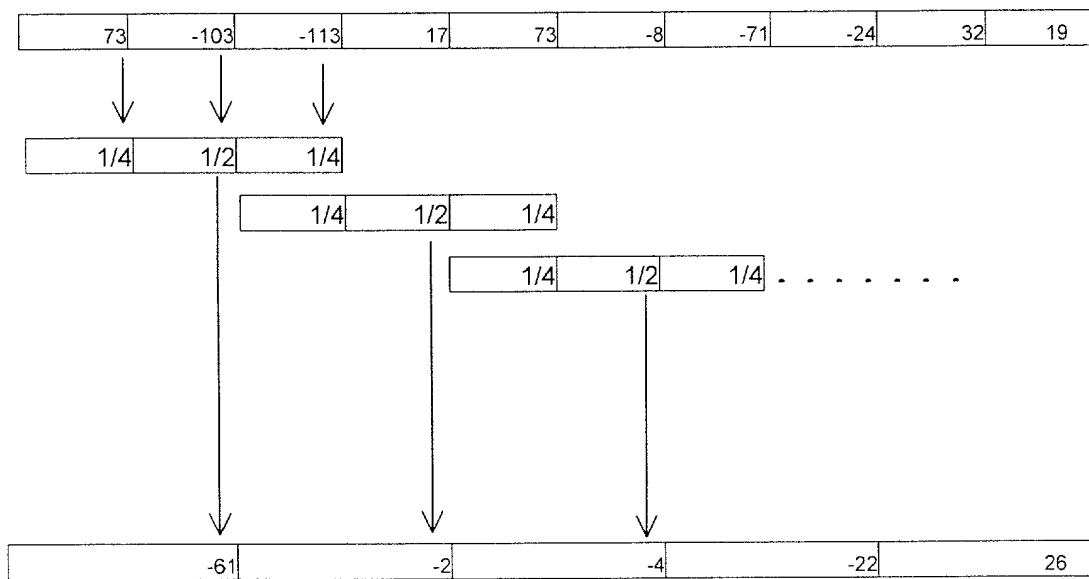
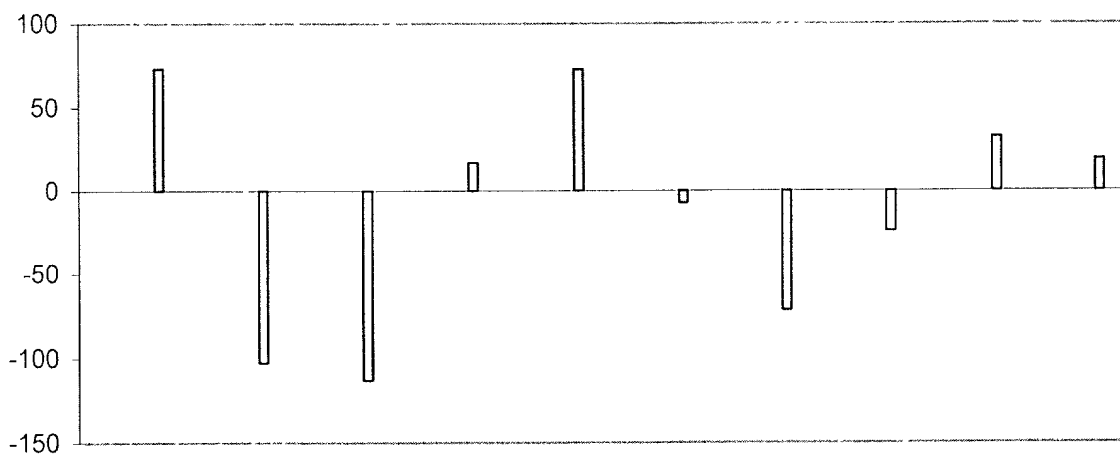


FIG.5C

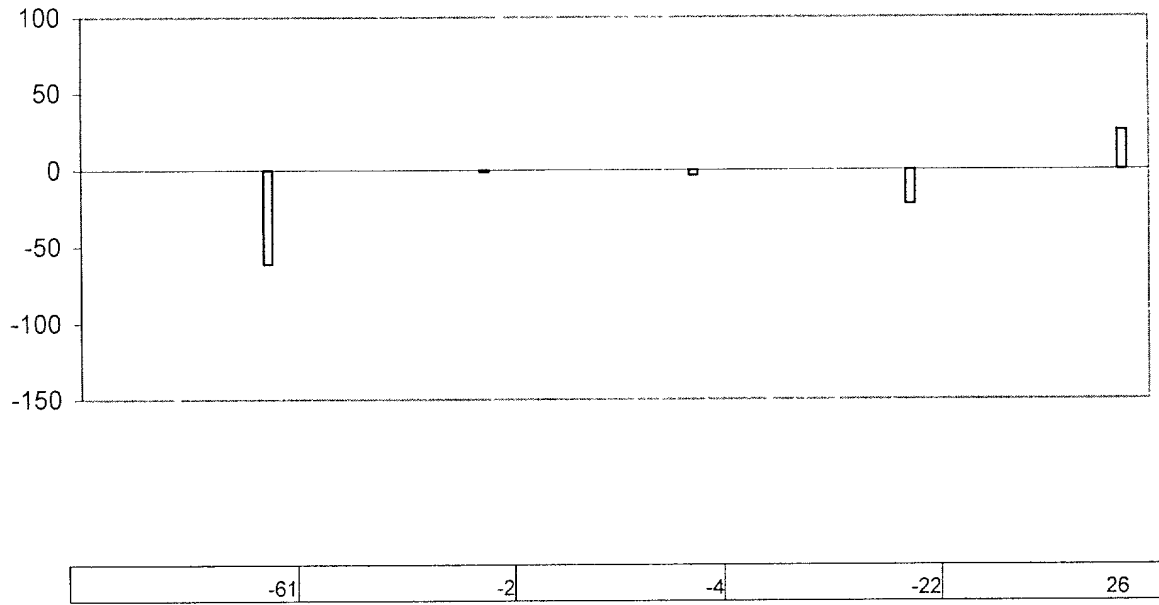


FIG.5D

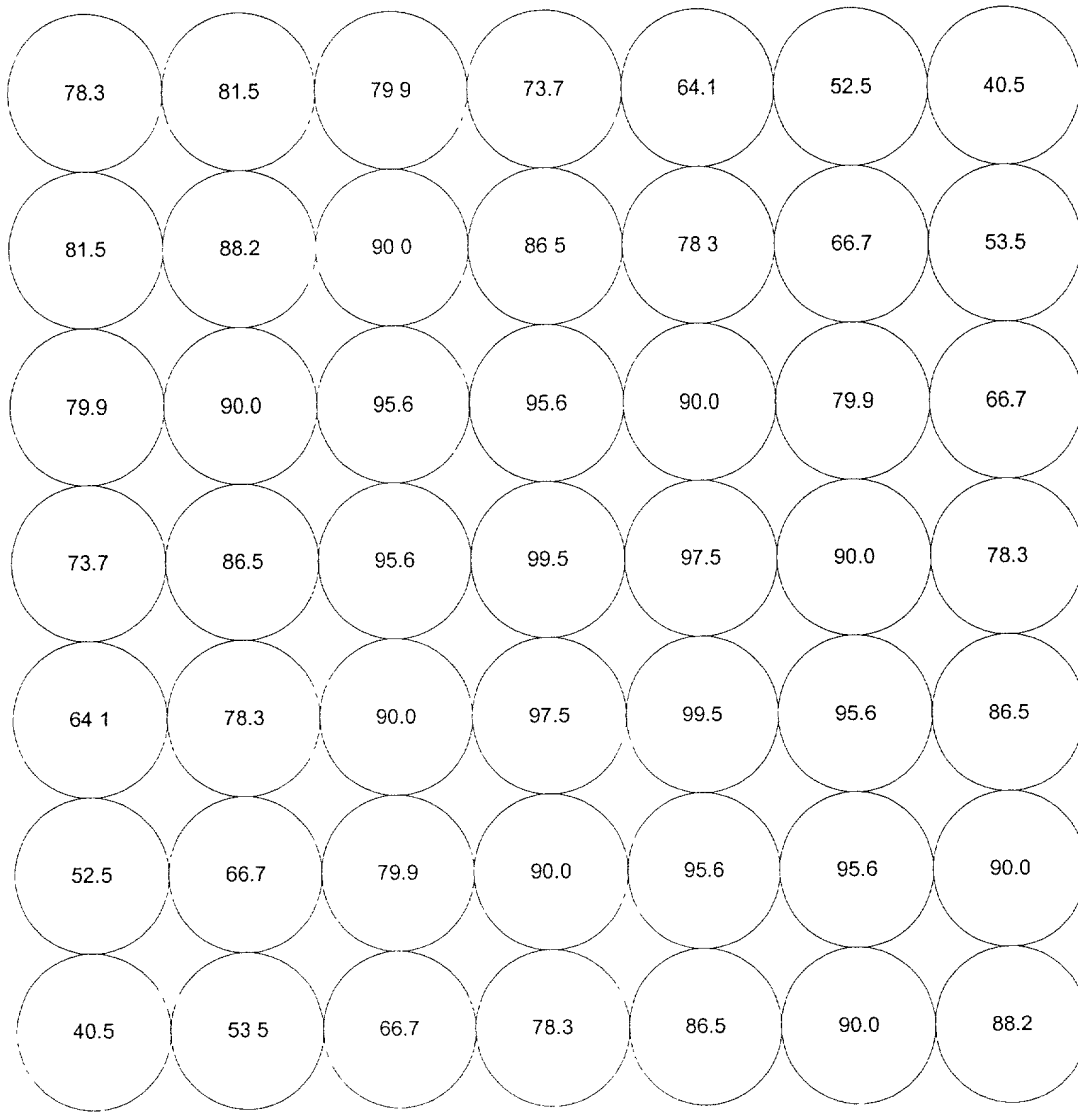


FIG. 6A

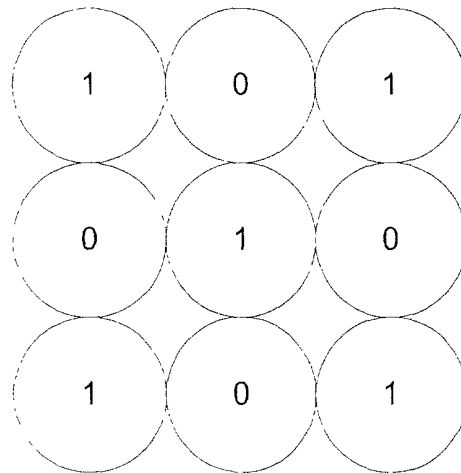
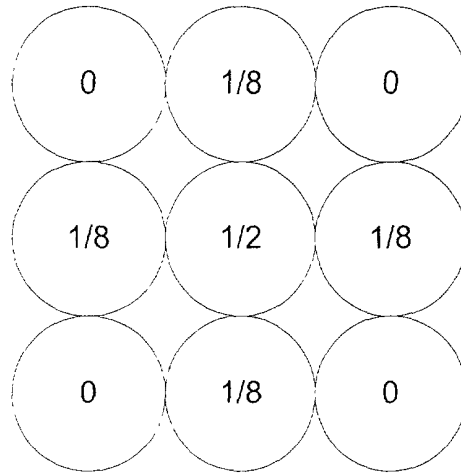


FIG. 6B

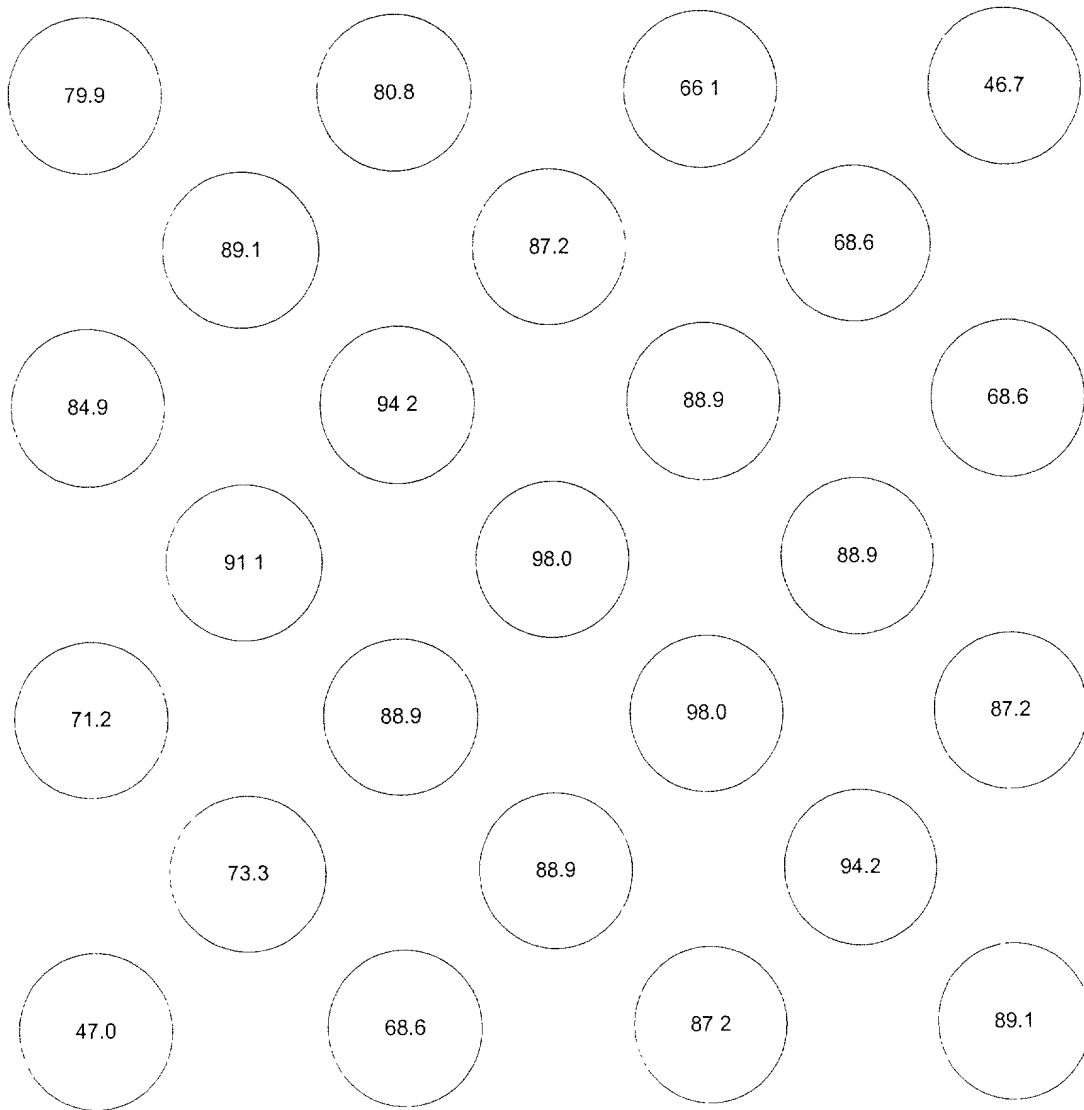


FIG. 6C

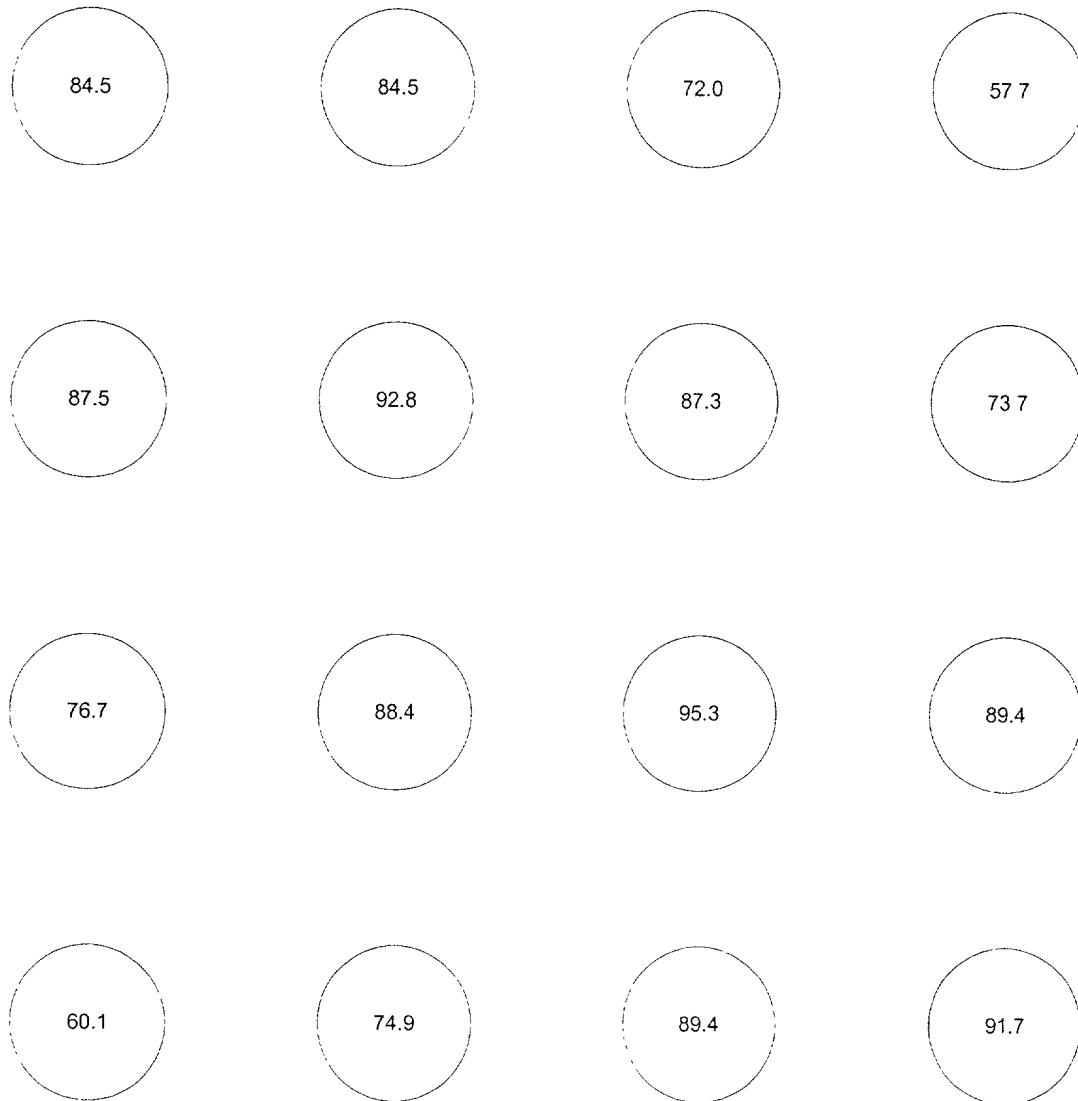


FIG. 6D

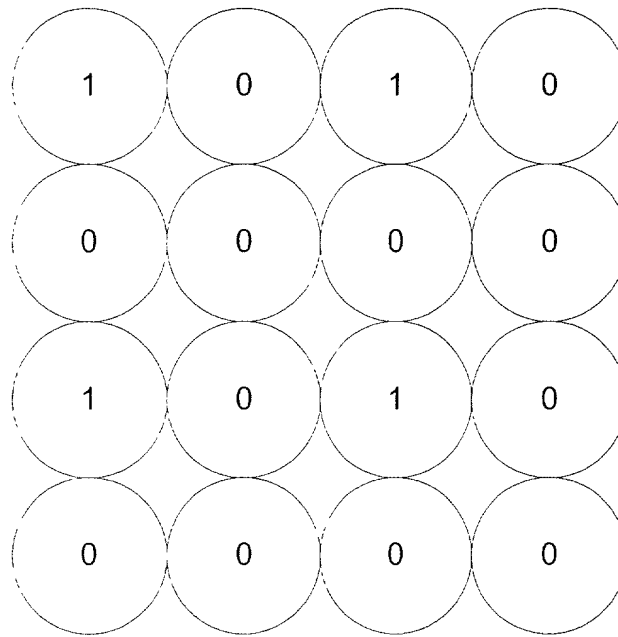


FIG. 6E

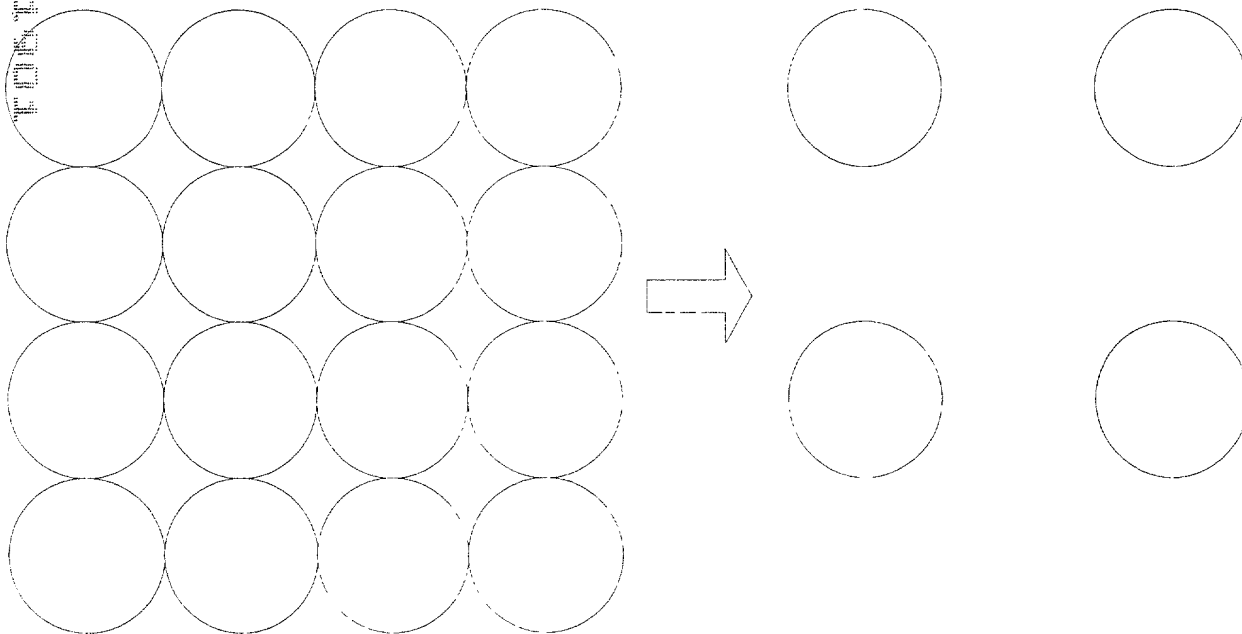


FIG. 6E

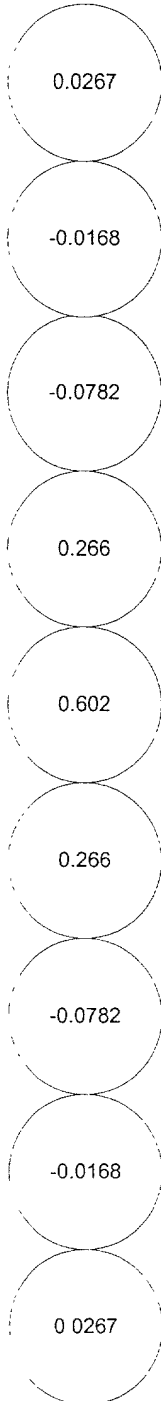
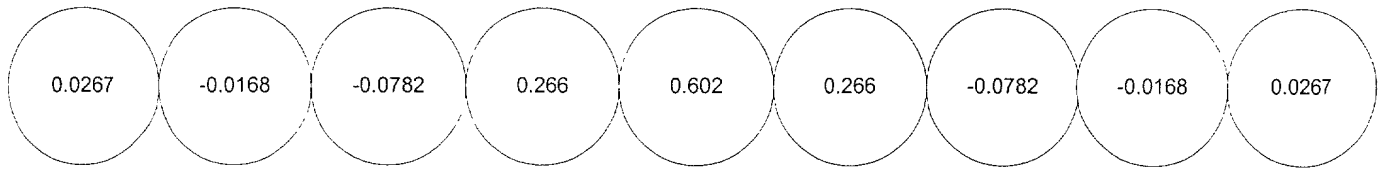


FIG. 6F

FIG. 6F

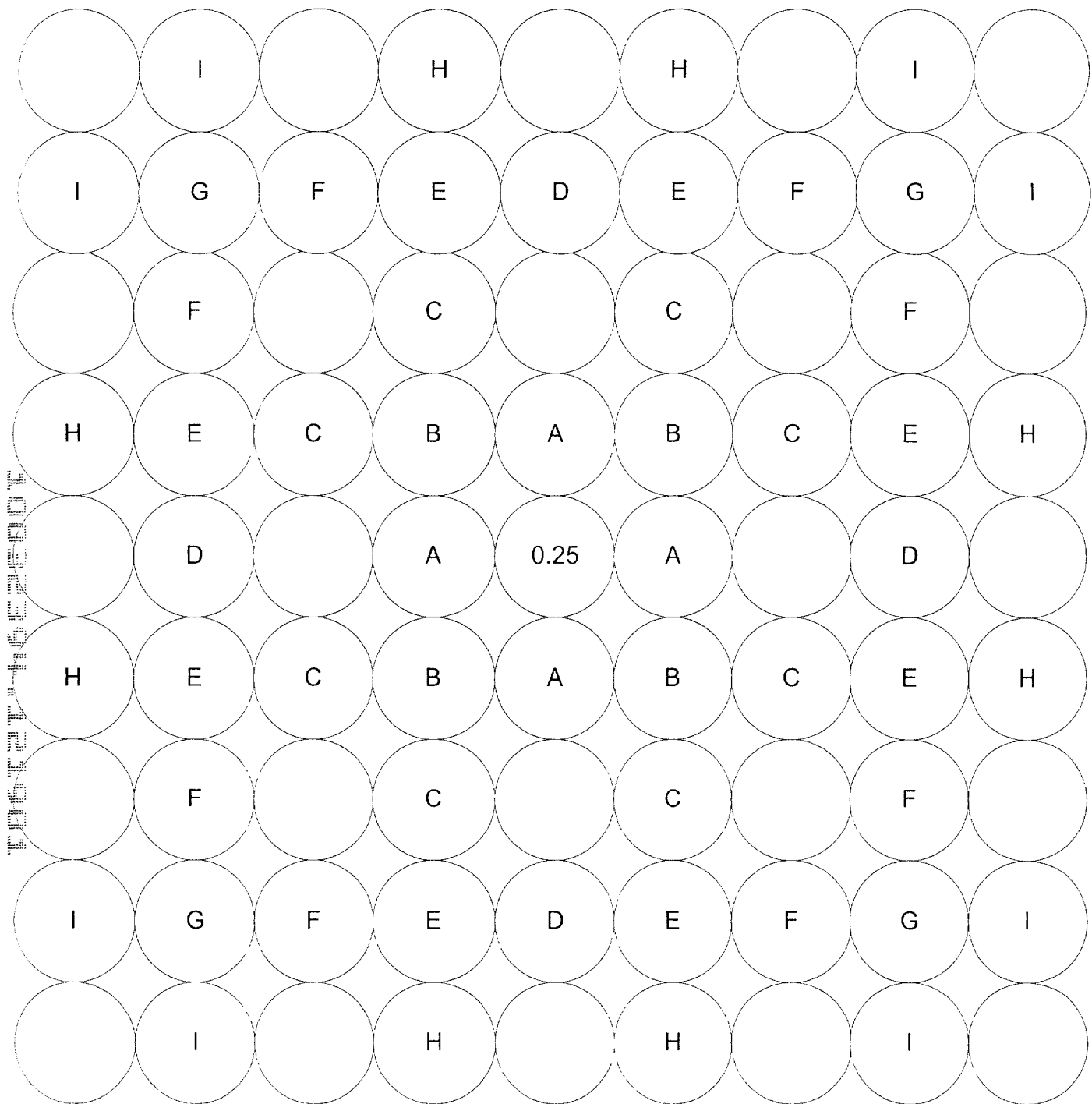


FIG. 6G

$A = 0.1609$
 $B = 0.0712$
 $C = -0.0208$
 $D = -0.0101$
 $E = -0.0045$
 $F = 0.0013$
 $G = 0.00028$
 $H = 0.00713$
 $I = -0.00045$

FIG. 7A

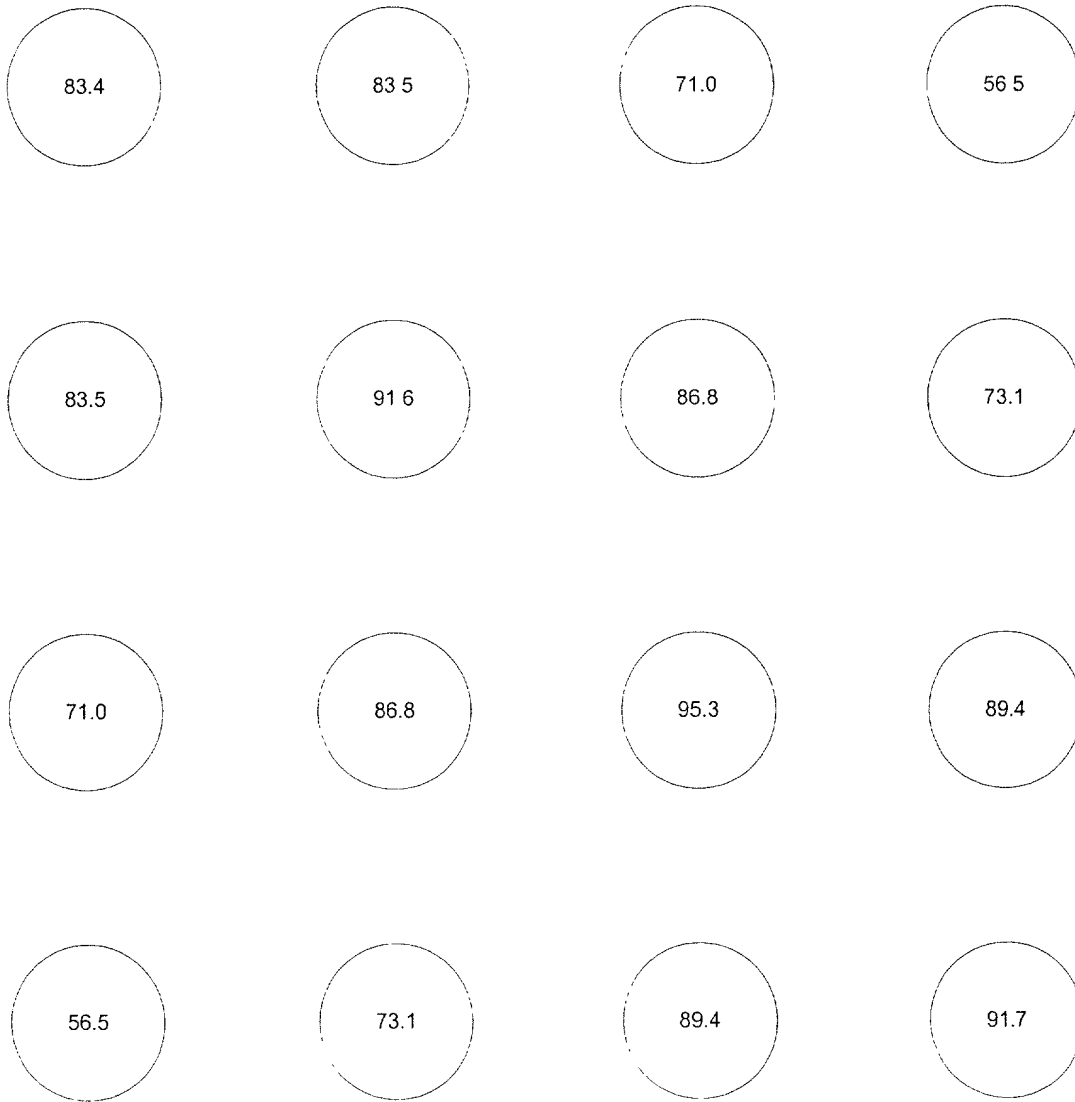


FIG. 7A

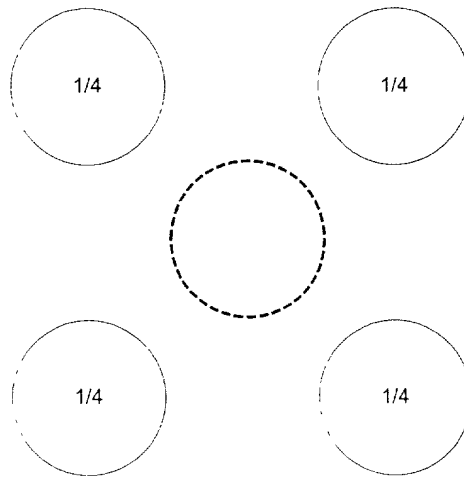


FIG. 7 B

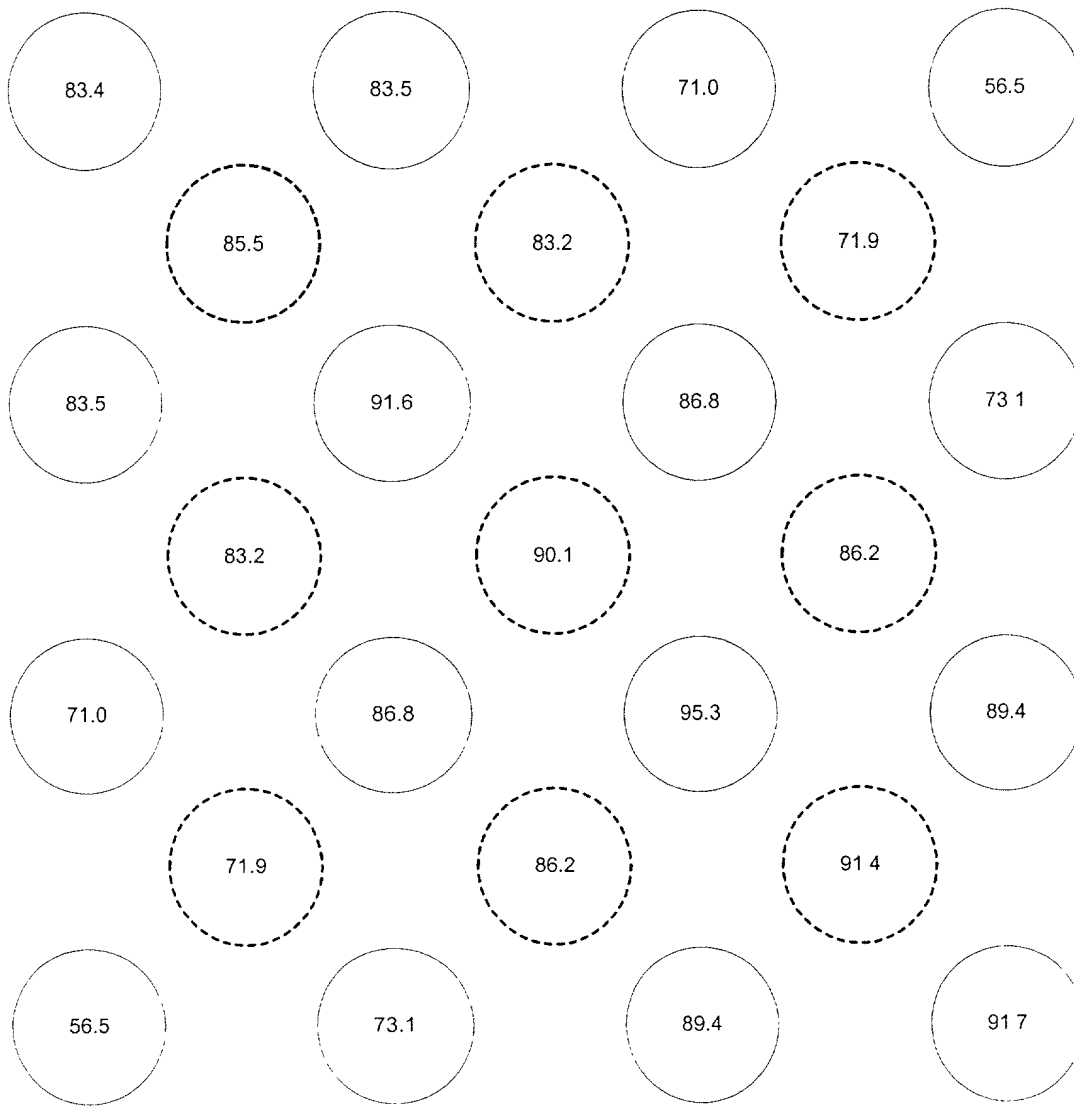


FIG. 7C

FIG. 7D

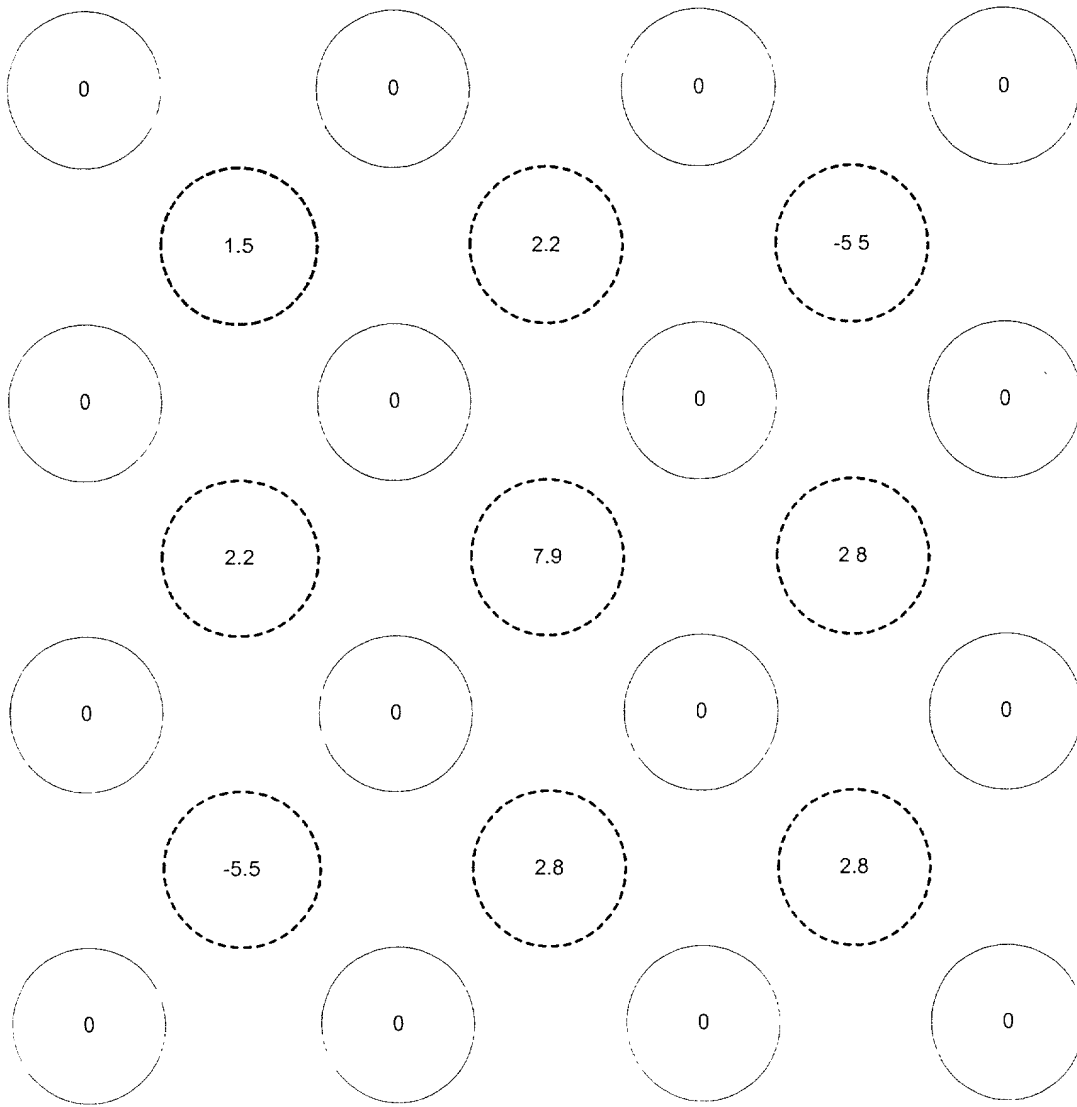


FIG. 7D

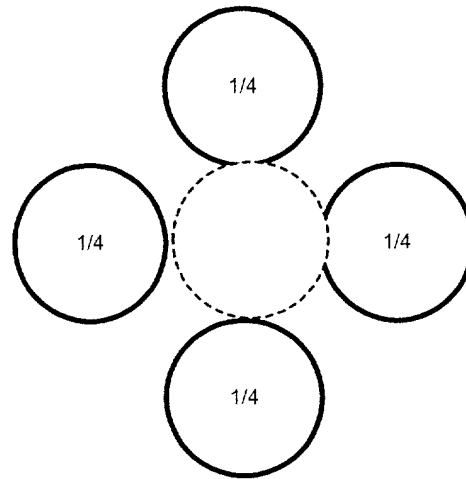


FIG. 7E

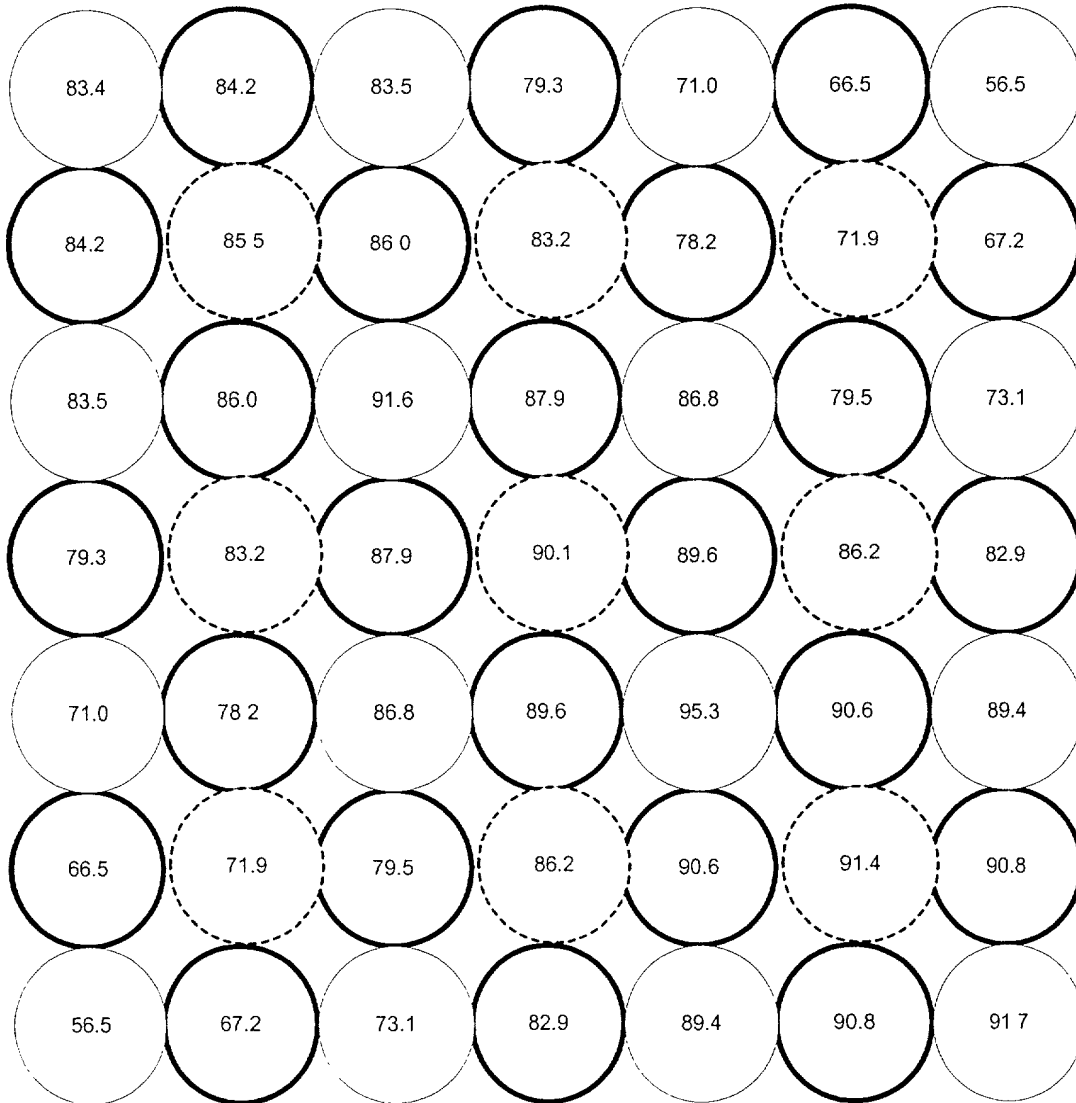


FIG. 7F

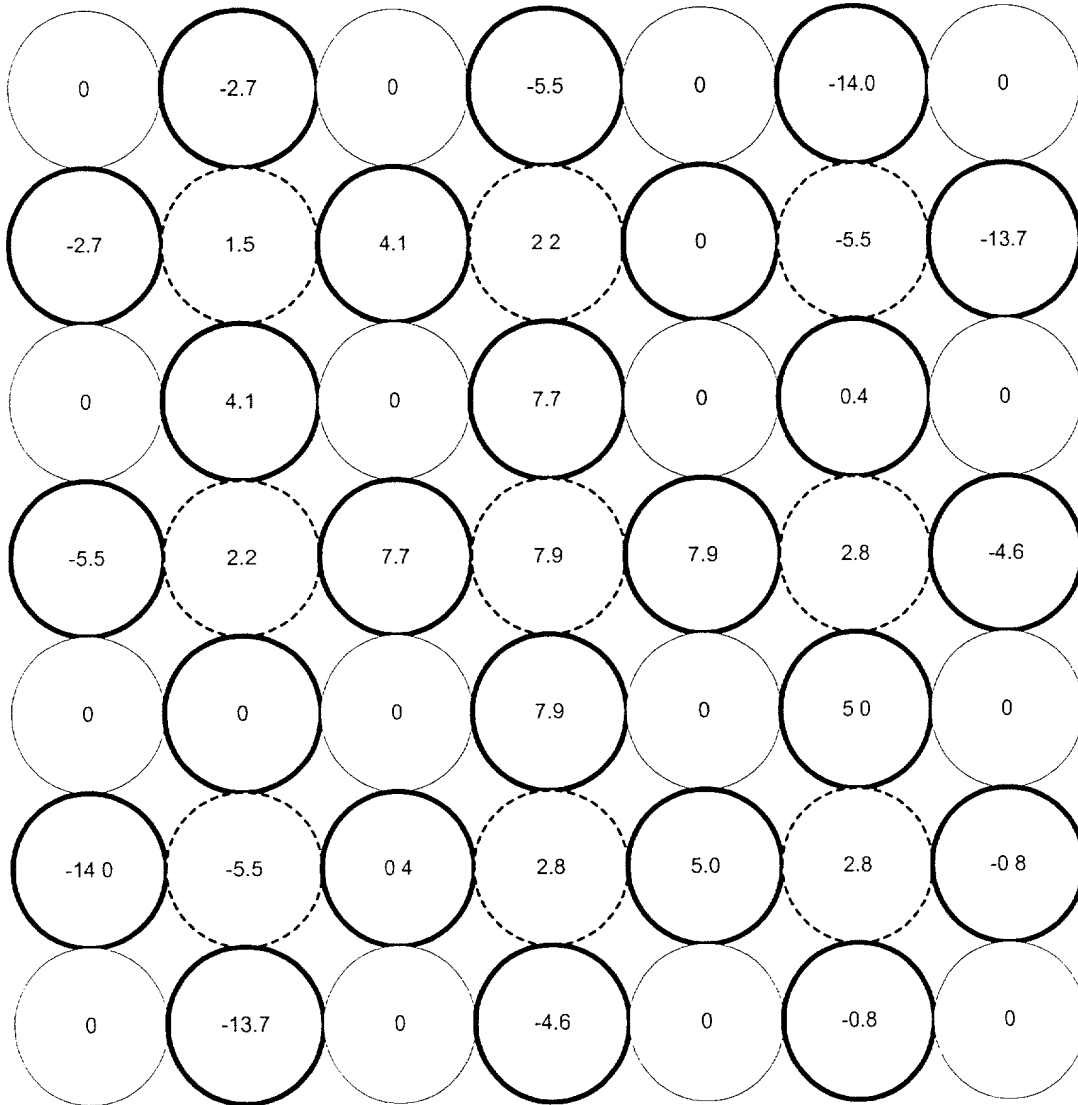


FIG. 7G

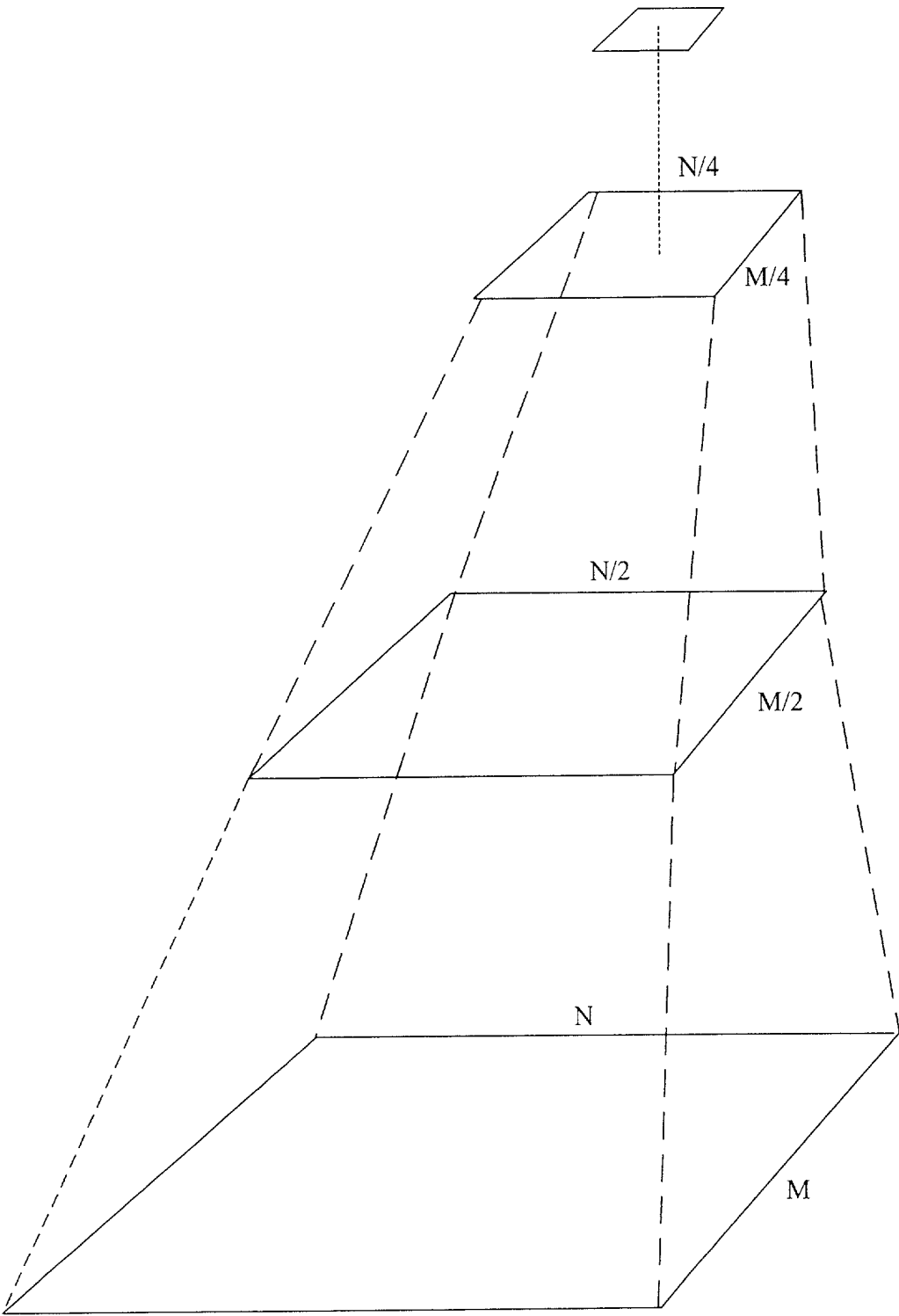


FIG. 8

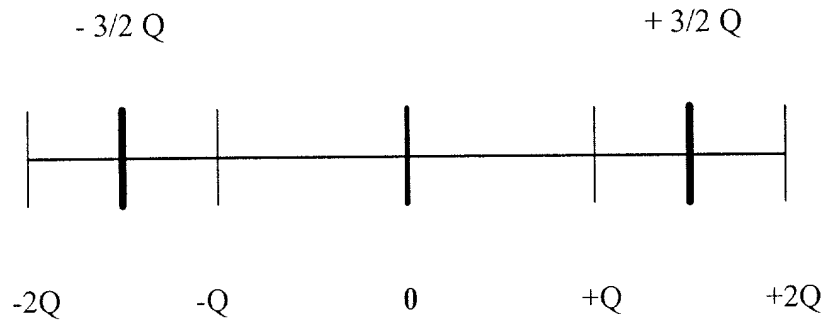


FIG. 9A

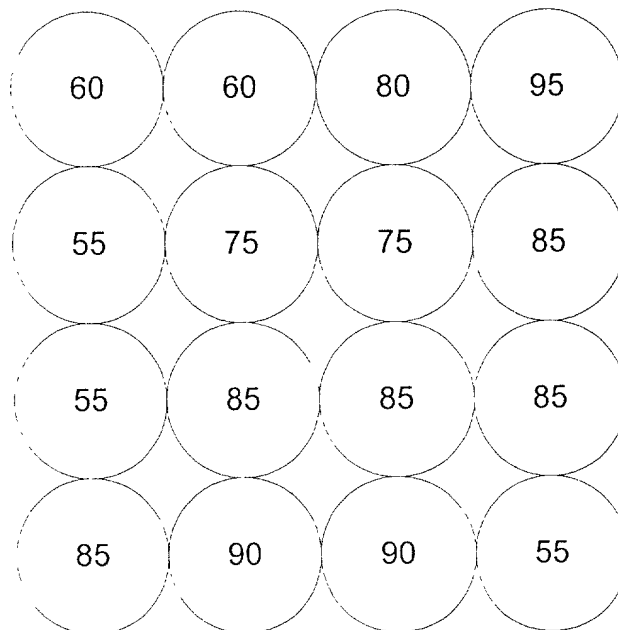
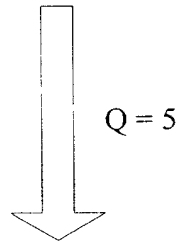
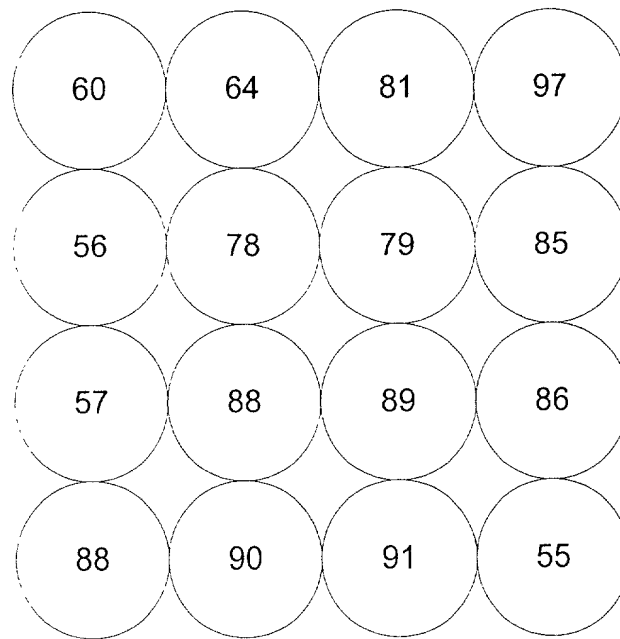


FIG. 9B

FIG. 10A

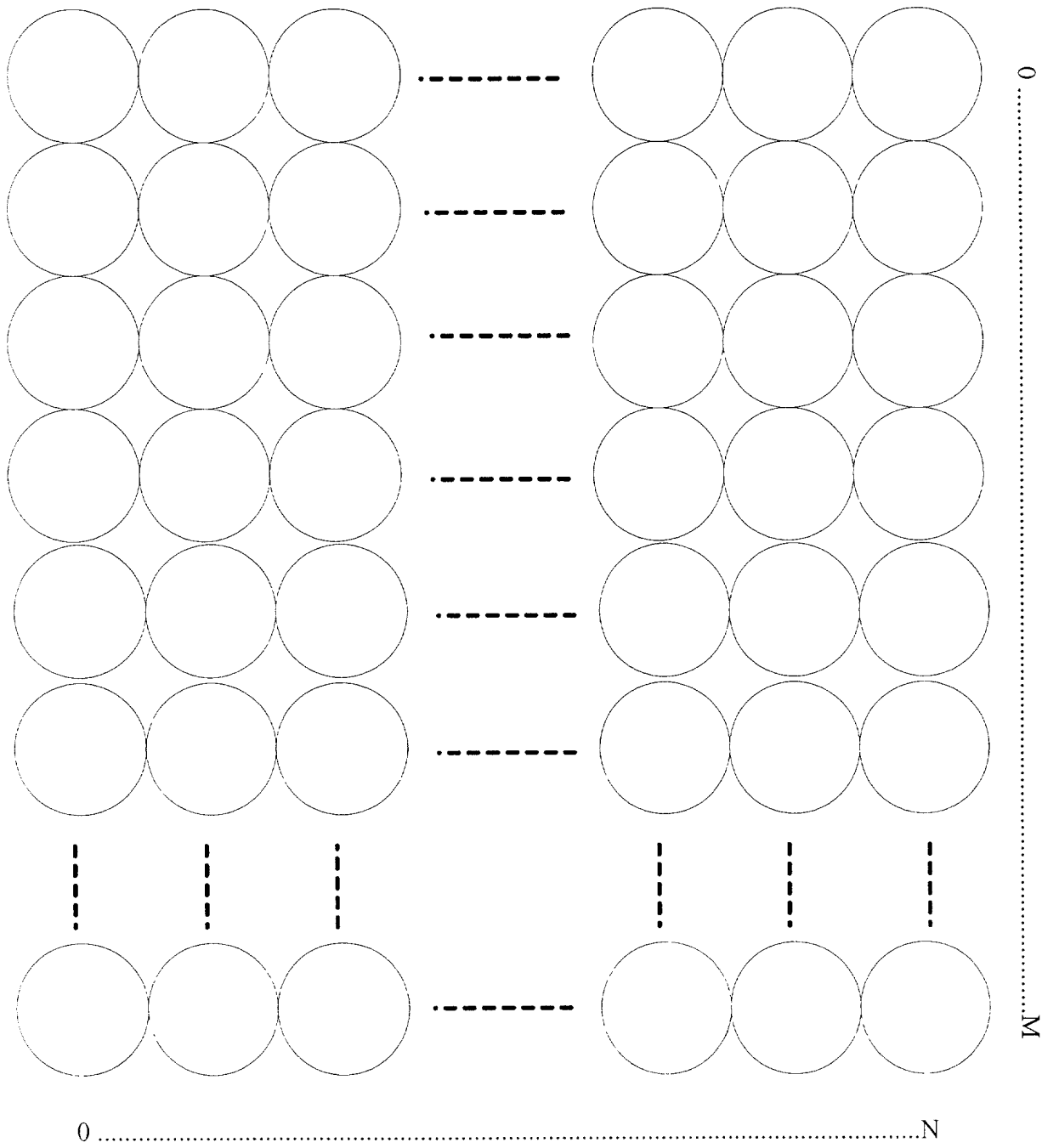


FIG. 10A

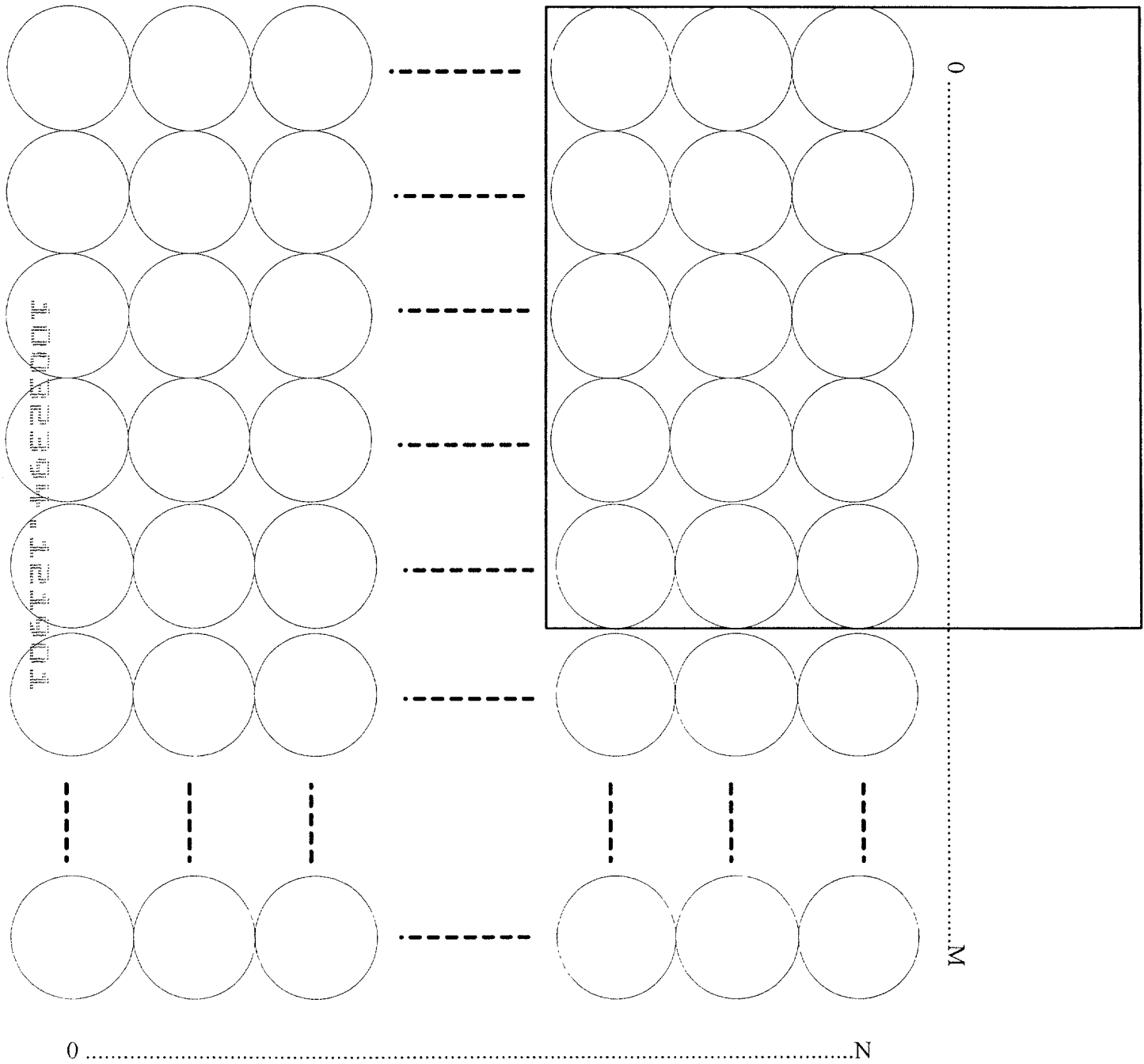


FIG. 10B

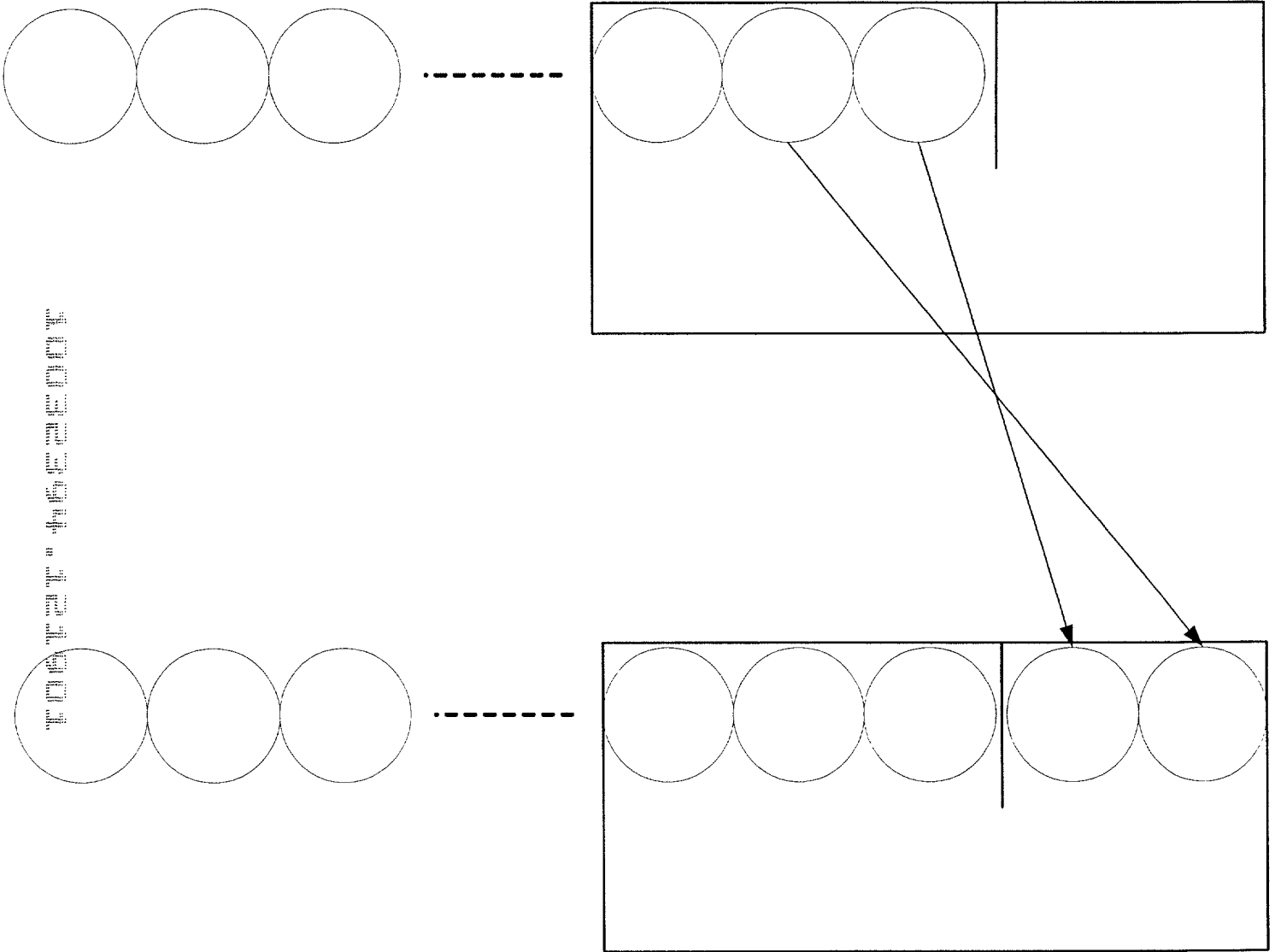


FIG. 10C

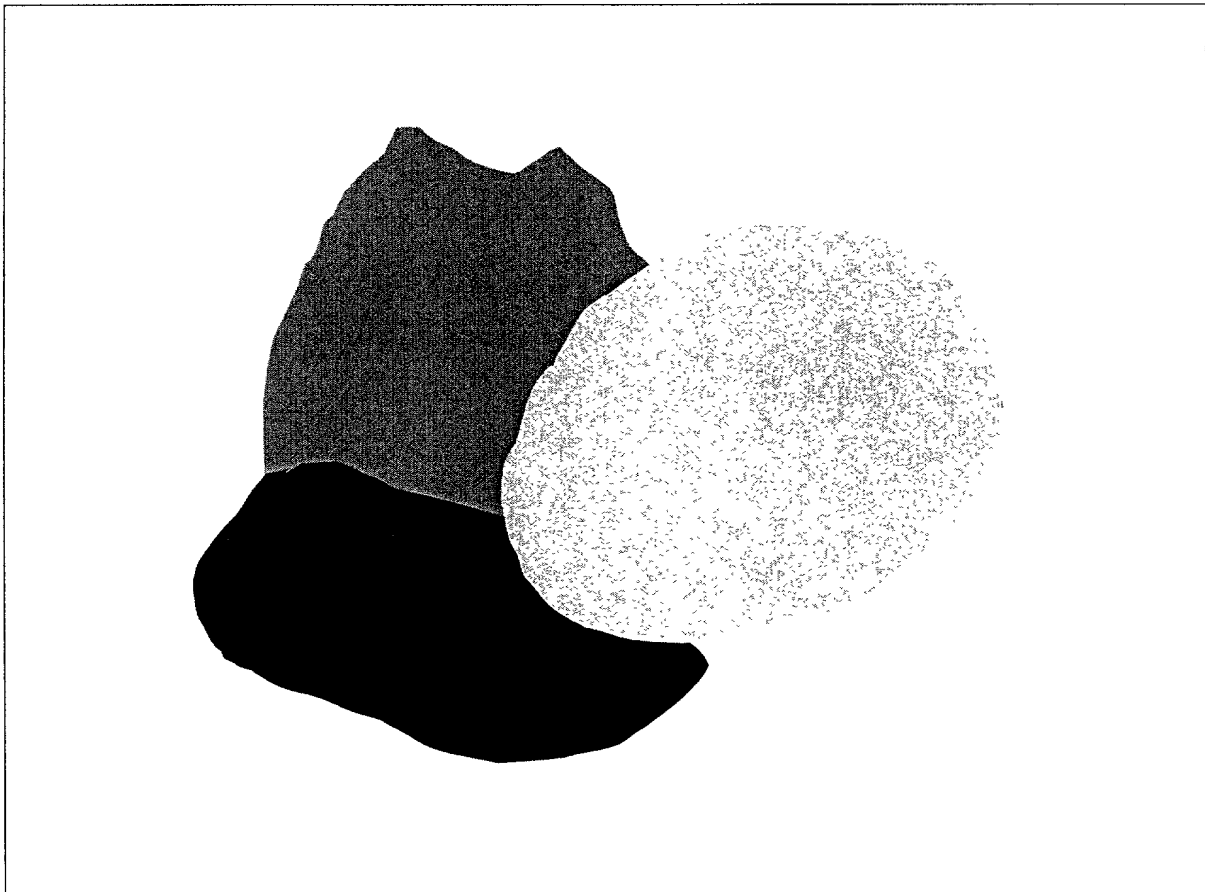


FIG. 11

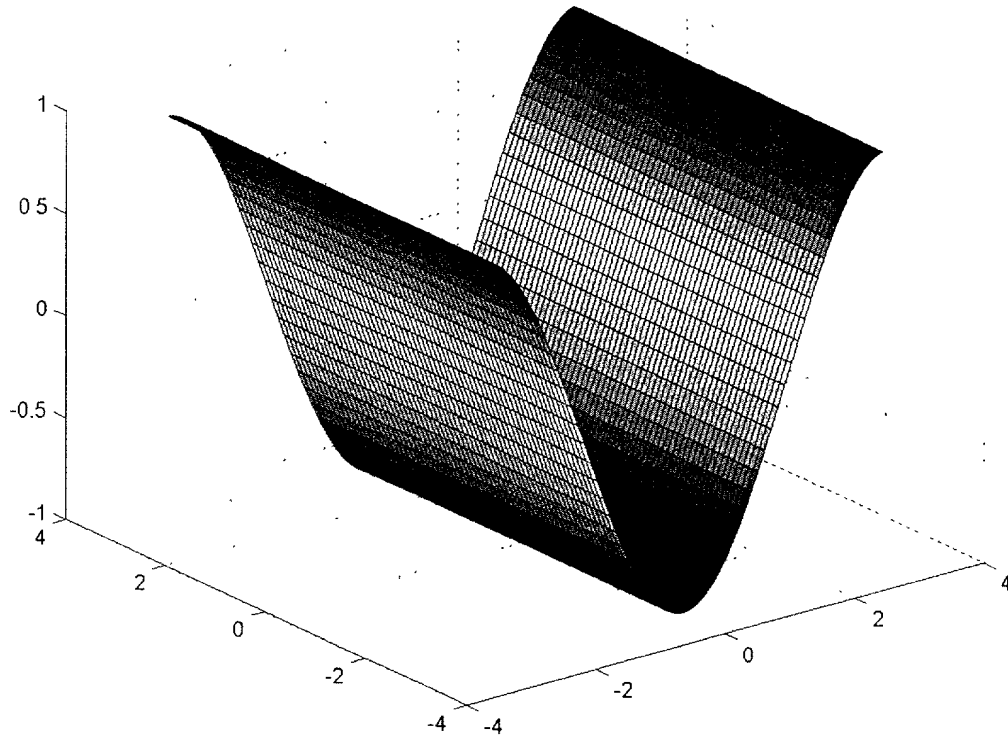


FIG. 12A

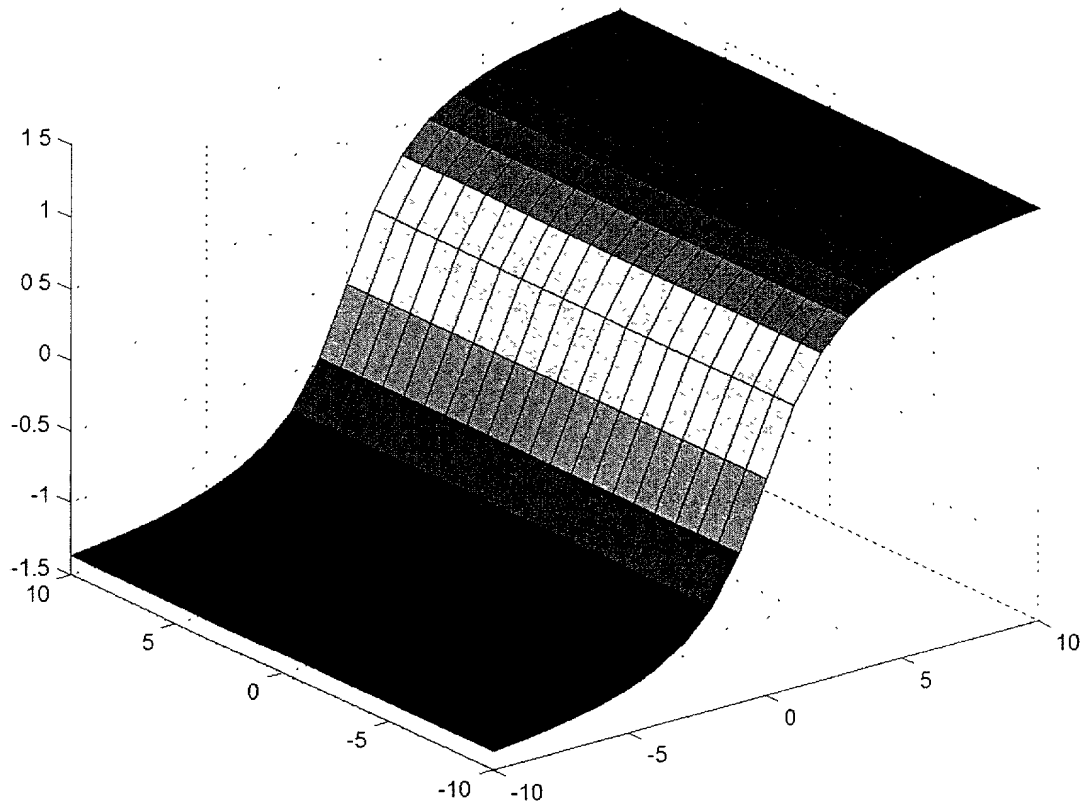


FIG. 12B

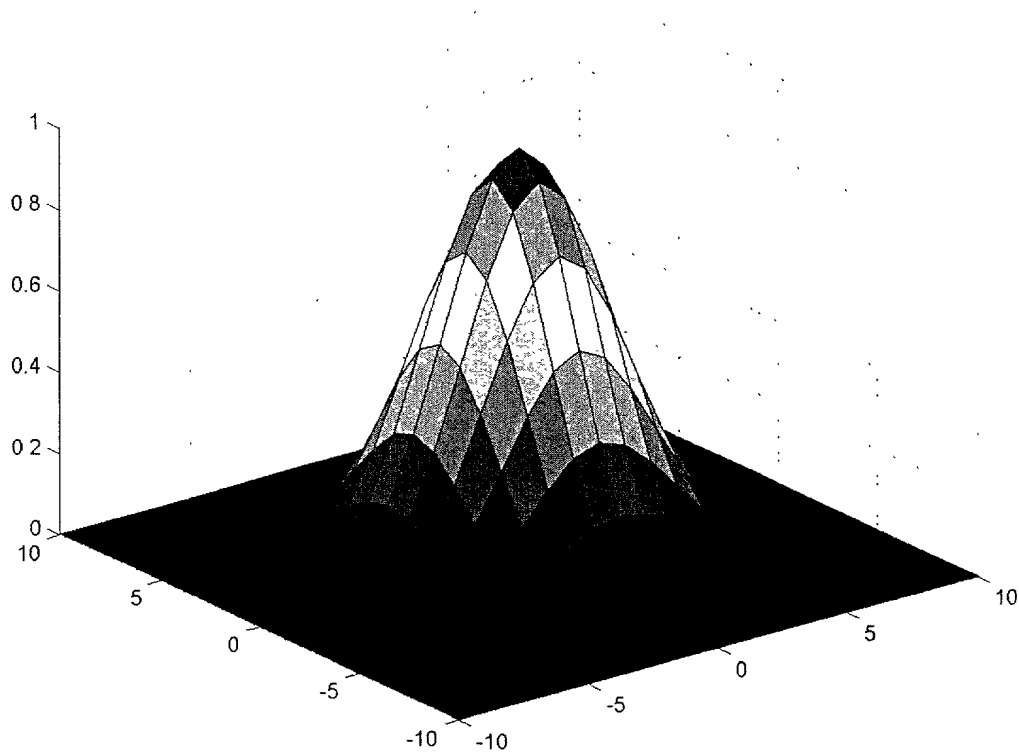


FIG. 12C

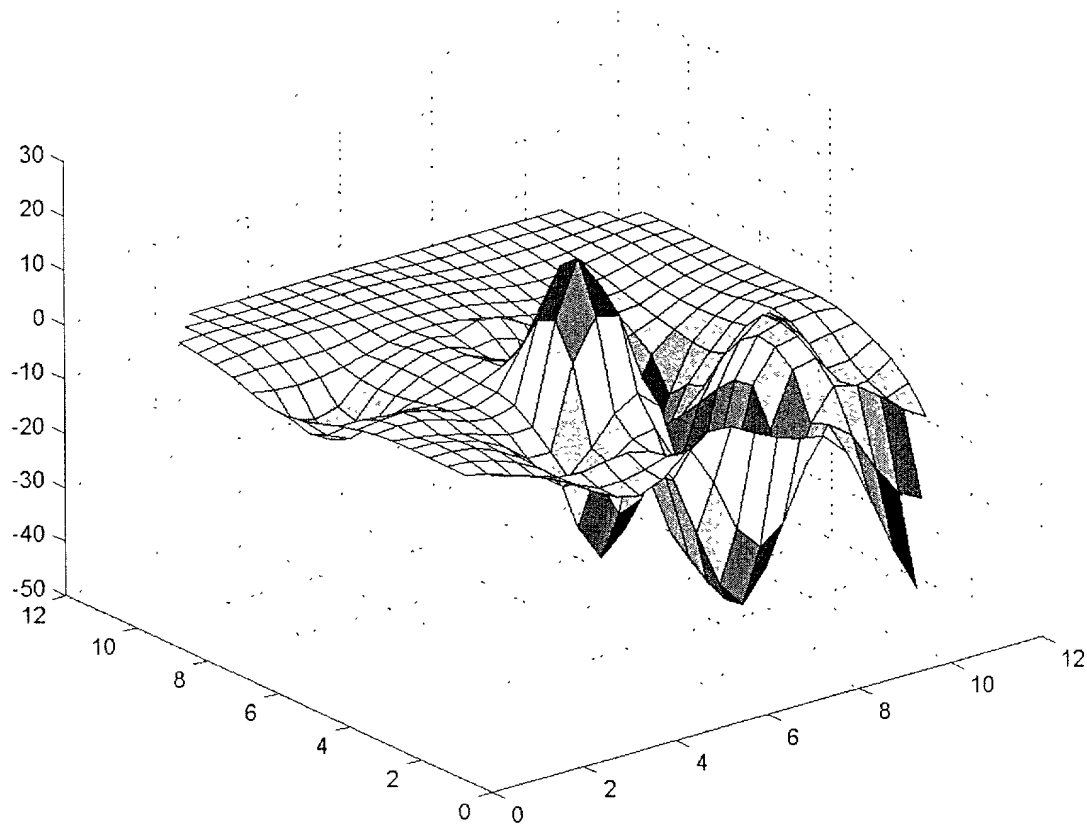


FIG. 12D

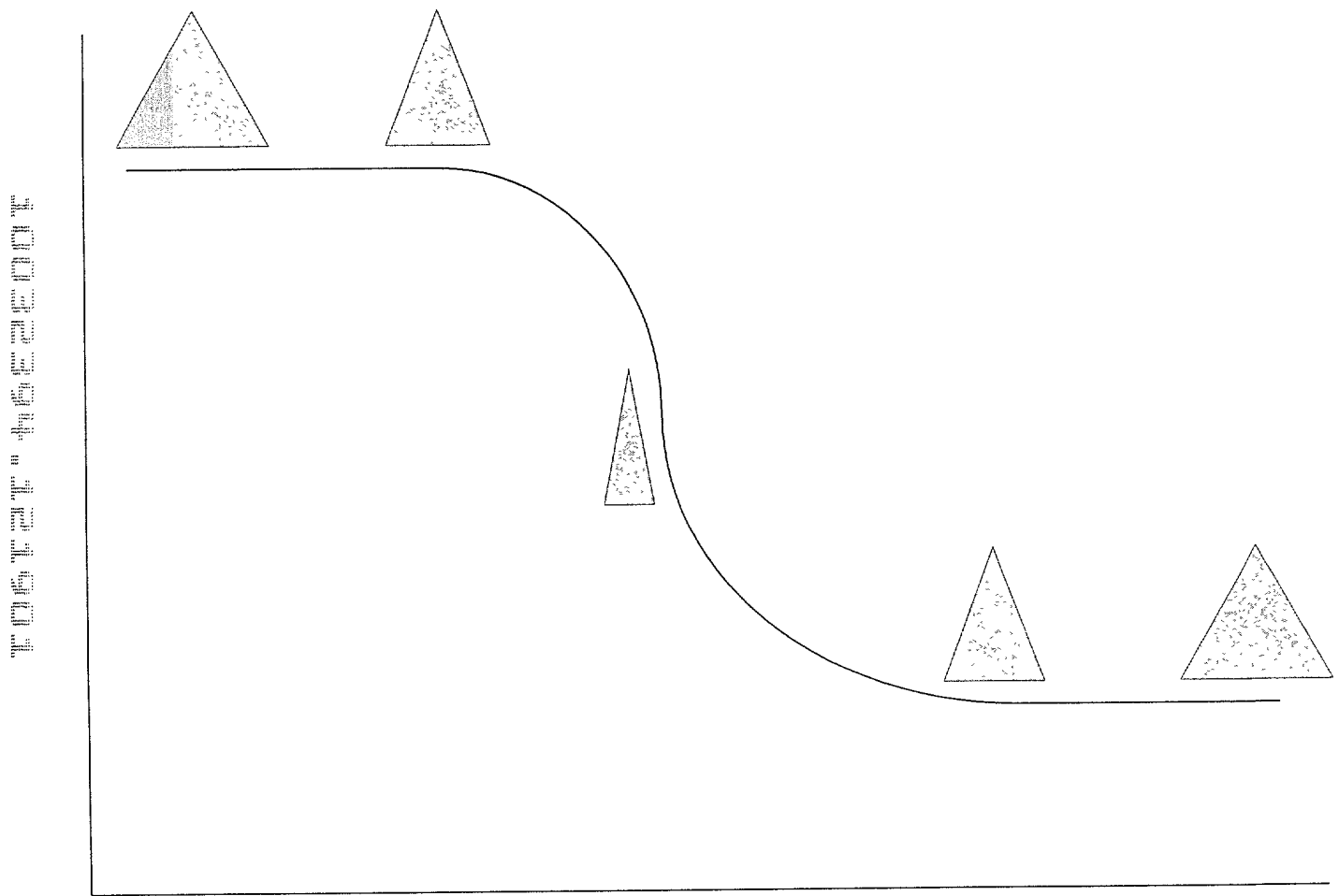


FIG. 13

10036794.4

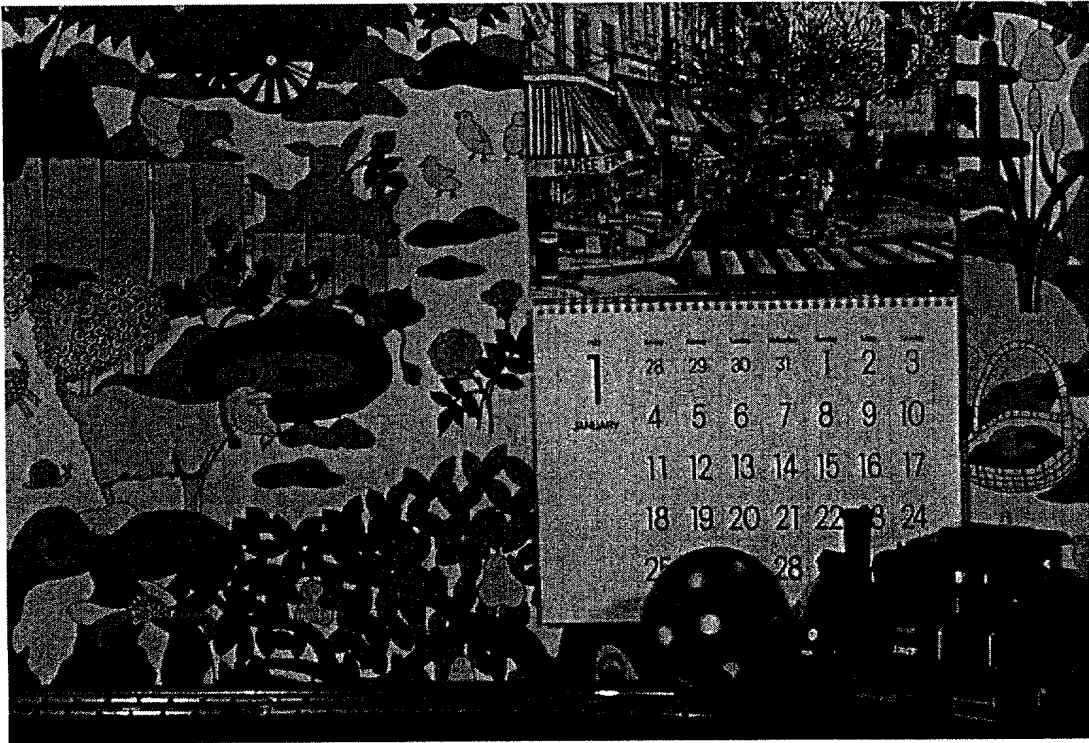


FIG. 14 A



FIG. 14 B

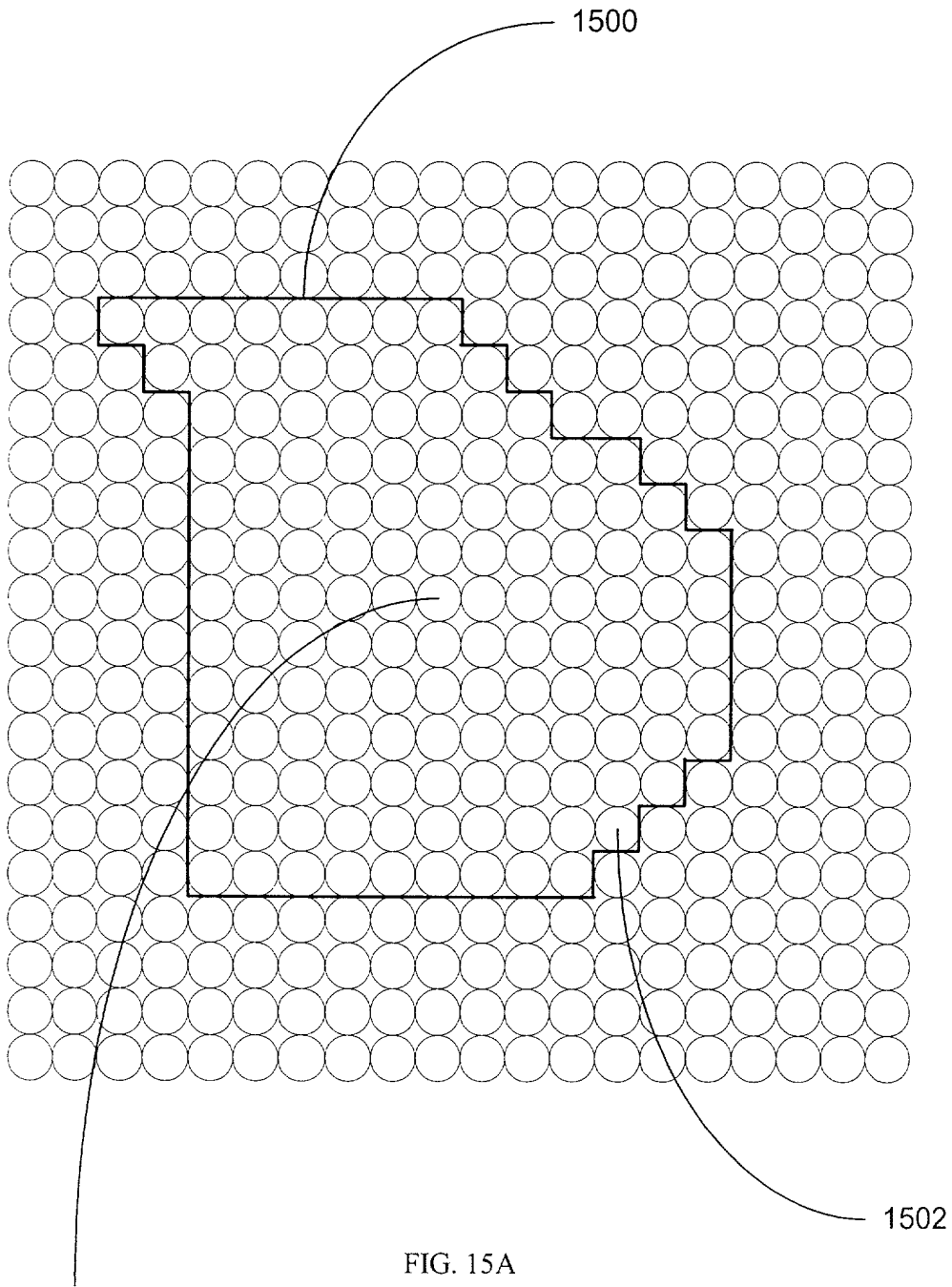


FIG. 15A

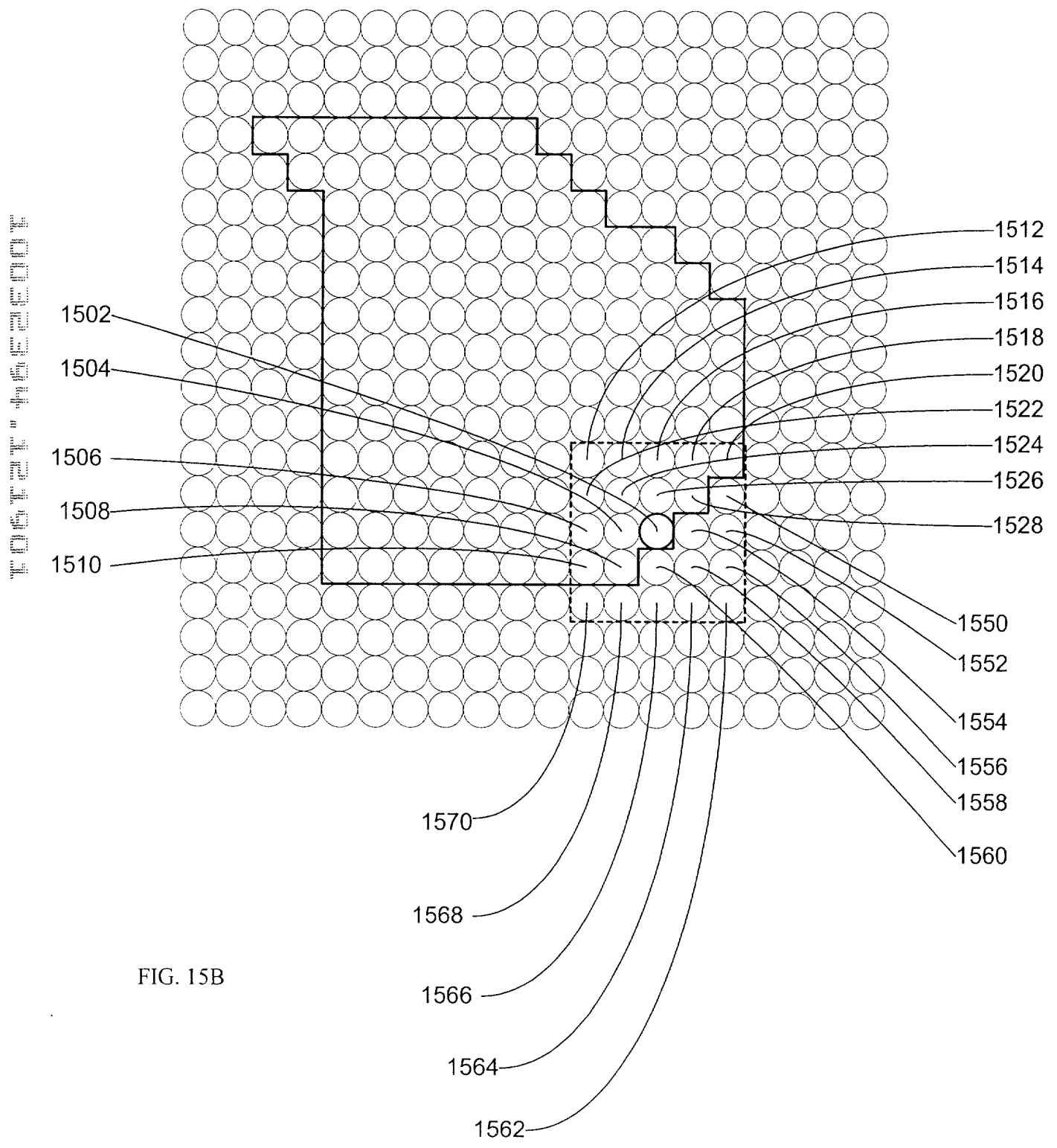


FIG. 15B

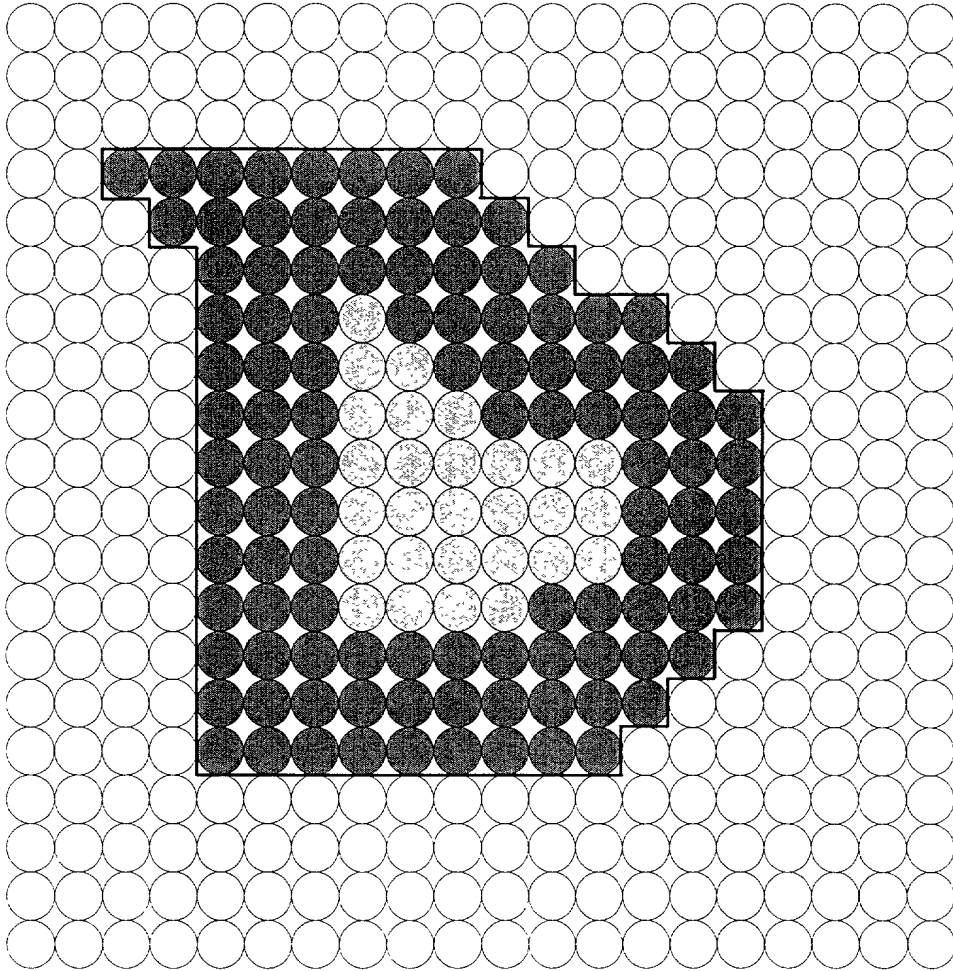


FIG. 15C

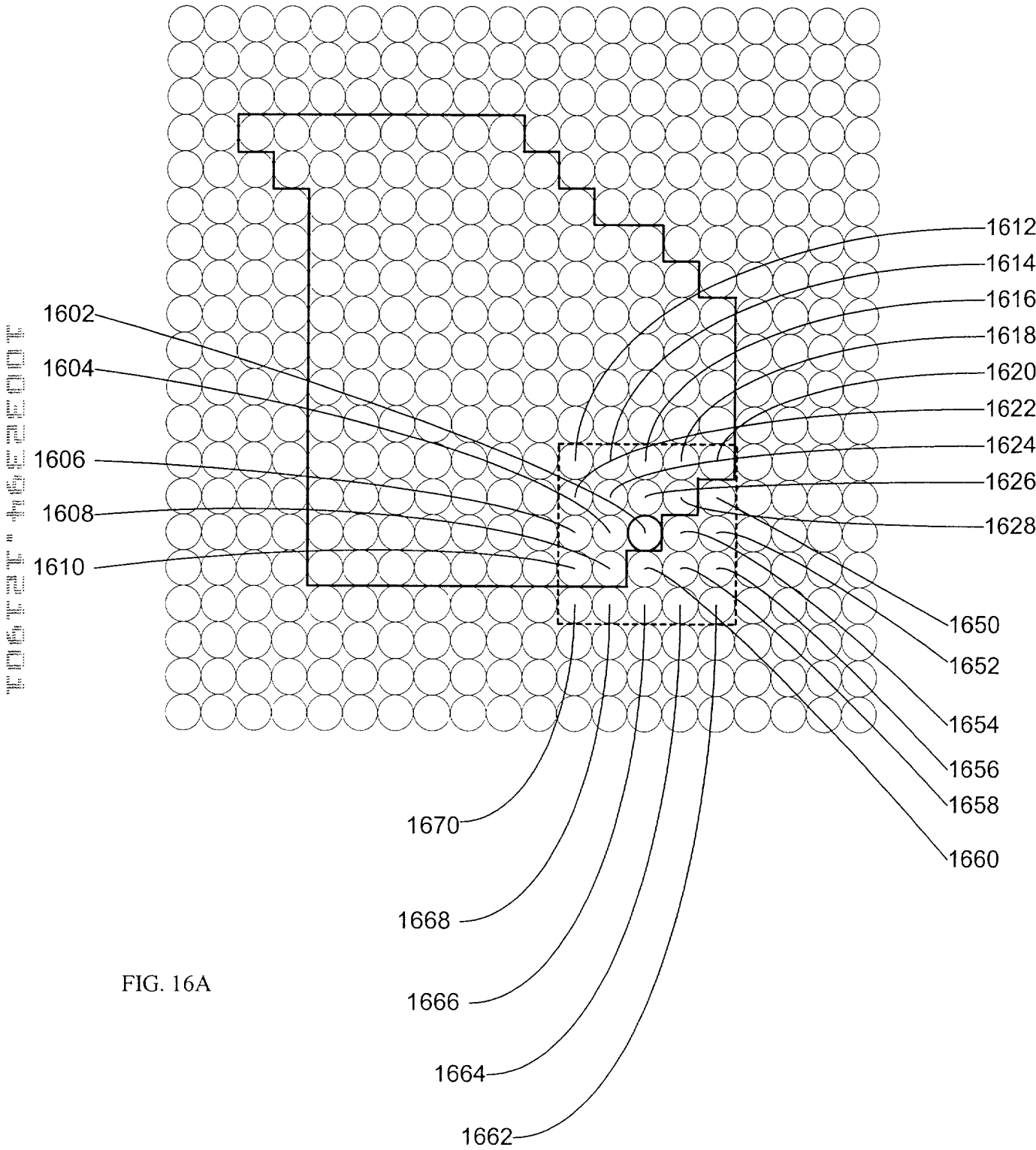


FIG. 16A

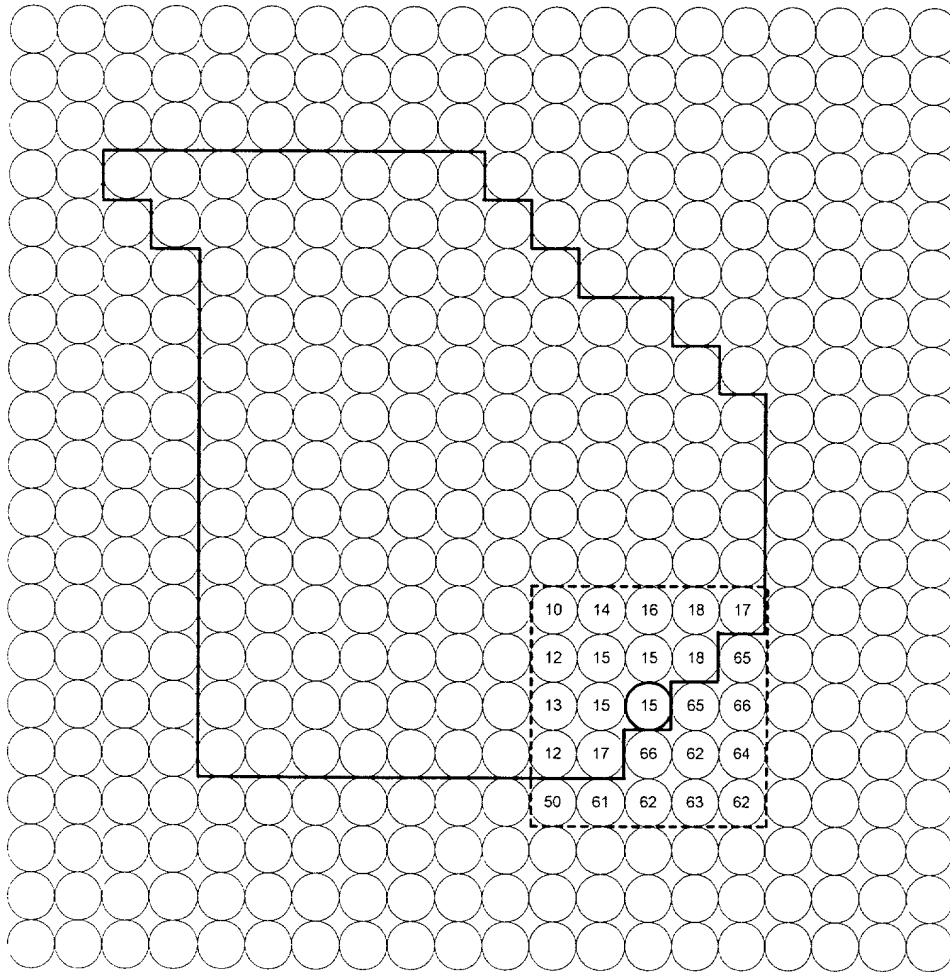
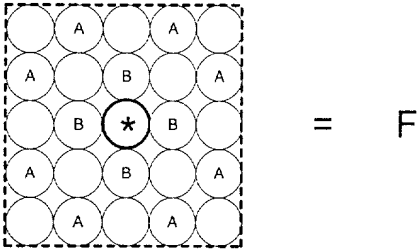


FIG. 16B

FIG. 16C



$$= F$$

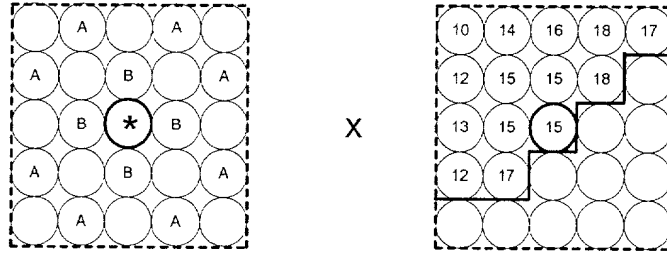
$$A = - 1/32$$

$$B = 5/16$$

FIG. 16C

$$A = -1/32$$

$$B = 5/16$$

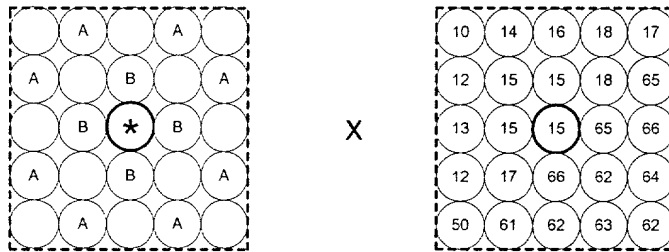


$$\text{Value of pixel } * = 5/16 (15+15) - 1/32 (14+18+12+12) = 7.62$$

FIG. 16D

$$A = -1/32$$

$$B = 5/16$$

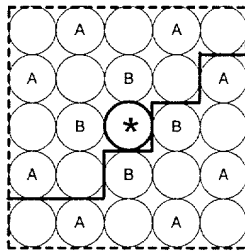


$$\text{Value of pixel*} = 5/16 (15+15+66+65) - 1/32 (14+18+65+64+63+61+12+12) = 40.65$$

FIG. 16E

$$A = -1/32$$

$$B = 5/16$$



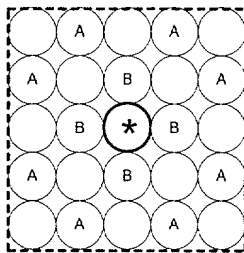
$$\Sigma \text{ weights inside} = 5/16 + 5/16 - 1/32 - 1/32 - 1/32 - 1/32 = 1/2 \neq 1$$

$$\text{Diff} = 1 - 1/2 = 1/2$$

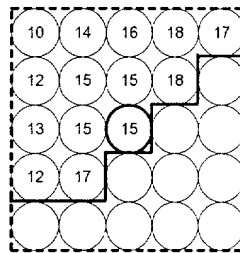
FIG. 16F

$$A = -1/32$$

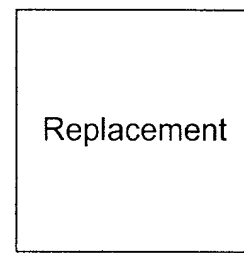
$$B = 5/16$$



X



+



Equation of $16D + \text{Diff} * (\text{Median inside the segment}) =$

$$7.62 + 1/2 (15) = 15.12$$

FIG. 16G

$A = -1/32$
 $B = 5/16$

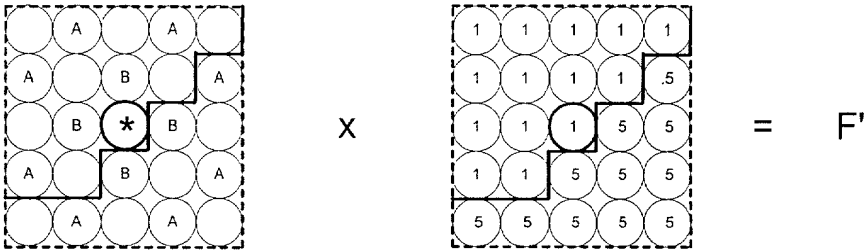
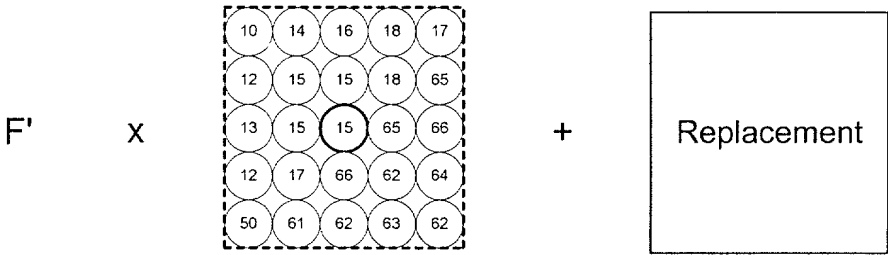


FIG. 16H



$$\frac{1}{32}(14+18+12+12) + \frac{5}{16}(15+15) + \frac{1}{2}[-\frac{1}{32}(65+64+63+61) + \frac{5}{16}(66+65)] + \frac{1}{2}(15) = 31.64$$

FIG. 16I

TABLE 1

59	37	20	3
41	19	5	22
18	4	20	36
5	17	37	63

FIG. 17A

18	2	18	44
41	19	5	22
43	17	3	17
21	4	19	42

FIG. 17B

FIG. 17C

2	18	38	59
5	19	41	61
3	17	43	56
4	21	40	57

FIG. 17C

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DOCUMENT CLASSIFICATION BARCODE SHEET



**Oath/Declaration, Small Entity,
and Power of Attorney**

8

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DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63) <input checked="" type="checkbox"/> Declaration Submitted With Initial Filing OR <input type="checkbox"/> Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16 (e)) required)	Attorney Docket Number	10006.000610
	First Named Inventor	Adityo Prakash
	COMPLETE IF KNOWN	
	Application Number	not yet known
	Filing Date	December 19, 2001
	Group Art Unit	not yet known
	Examiner Name	not yet known

As a below named inventor, I hereby declare that:

My residence, post office address, and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

ADAPTIVE TRANSFORMS

the specification of which (Title of the Invention)

☒ is attached hereto

OR

☐ was filed on (MM/DD/YYYY) [] as United States Application Number or PCT International

Application Number [] and was amended on (MM/DD/YYYY) [] (if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims as amended specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY) Country	Priority Not Claimed	Certified Copy Attached?	
				YES	NO
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

☐ Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto:

[Page 1 of 2]

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DECLARATION — Utility or Design Patent Application

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James K. Okamoto, Reg. No. 40,110
 DEGUZMAN OKAMOTO & BENEDICTO, LLP.

Name

P.O. Box 51900

Address

Palo Alto

California

94303

City

State

ZIP

U.S.A.

650-691-2030

650-691-2032

Country

Telephone

Fax

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

NAME OF SOLE OR FIRST INVENTOR:

☐ A petition has been filed for this unsigned inventor

Given Name Adityo
 (first and middle [if any])

Family Name Prakash
 or Surname

Inventor's
 Signature

Date

Redwood Shores

CA

U.S.

INDIA

Residence: City

State

Country

Citizenship

600 Marlin Court

Mailing Address

Redwood Shores

CA

94065

U.S.

City

State

Zip

Country

NAME OF SECOND INVENTOR:

☐ A petition has been filed for this unsigned inventor

Given Name Edward
 (first and middle [if any])

Family Name Ratner
 or Surname

Inventor's
 Signature

Date

Residence: City Sunnyvale

State CA

Country U.S.

Citizenship U.S.

Mailing Address 433 Crescent Avenue

City Sunnyvale

State CA

Zip 94087

Country U.S.

☒ Additional inventors are being named on the 1 supplemental Additional Inventor(s) sheet(s) PTO/SB/02A attached hereto.

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DECLARATION**ADDITIONAL INVENTOR(S)
Supplemental Sheet
Page 1 of 1**

Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle [if any])		Family Name or Surname	
Dimitri		Antsos	
Inventor's Signature		Date	
Residence: City	San Marino	State	CA
		Country	U.S.
Mailing Address 534 S. Berkeley Avenue			
Mailing Address			
City	San Marino	State	CA
		Zip	91108
		Country	U.S.
Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle [if any])		Family Name or Surname	
Inventor's Signature		Date	
Residence: City		State	
		Country	
Mailing Address			
Mailing Address			
City		State	
		Zip	
		Country	
Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle [if any])		Family Name or Surname	
Inventor's Signature		Date	
Residence: City		State	
		Country	
Mailing Address			
Mailing Address			
City		State	
		Zip	
		Country	

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